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ABSTRACT

This document presents lessons involving basic skills and the school counselor. The first lesson focuses on tenets and issues of integration of academic and vocational education. The second lesson focuses on helping school counselors understand different integration models, including their purposes, sources of support, and expected outcomes. The premise of the third lesson is that school counselors need to clarify their role in helping students plan their coursework in a way that ensures their acquisition of the contemporary competencies now collectively referred to as "basic skills." The fourth lesson helps learners investigate why counselors must argue for applied forms of learning which integrate the best of academic and vocational instructional methods. Included with each lesson is information on the justification for the lesson; the expected learner outcome; instructor resources; directions for teaching-learning interaction; debriefing strategies; list of resources; and a brief discussion of an individualized learning plan for learners studying this content in an individualized program. (ABL)

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COUNSELOR EDUCATION

Counselor Role and Educational Change: Planning, Integration, and Basic Skills

BASIC SKILLS, INTEGRATION, AND THE SCHOOL COUNSELOR

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COUNSELOR
EDUCATION

Counselor Role and
Educational Change:
Planning, Integration,
and Basic Skills

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BASIC SKILLS, INTEGRATION, AND THE SCHOOL COUNSELOR

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TENETS AND ISSUES OF INTEGRATION

Perennial Problem

How can comprehensive school counseling and guidance programs contribute to the delivery of the basic skills?

Practical Problem

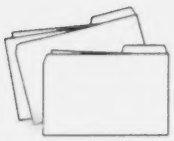
What should be done about (1) school counselors' understanding of the tenets associated with combining academic and vocational education and (2) integrating basic skills into vocational education?

Justification for Lesson

The "integration" of academic and vocational education is being proposed as one way to improve the education of all students and to increase their attainment of the basic skills necessary for success at work, home, and school. The purpose of this lesson is to help school counselors examine some of the basic beliefs and tenets underlying this proposal.

Learner Outcome

The learner will identify and describe the major beliefs and tenets promoting the integration of academic and vocational education.



Instructor Resources

- Issues of Education (1) (transparency)
- Issues of Education (2) (transparency)
- Suspect Practices (1) (transparency)
- Suspect Practices (2) (transparency)
- Vocational Education and the Workforce of the 1990s (transparency)

Teaching-Learning Interaction

The instructor should present the two transparencies titled Issues of Education I and II. The instructor should ask the learners to respond to the following questions:

- What do students stand to gain from the integration of academic and vocational education?
- How will integration address the issues presented in the transparencies?
- What effect would integration have on school counseling and guidance programs?

The instructor should present the transparencies titled Suspect Practices I and II and ask the learners to respond to the following questions:

- What evidence of tracking can be observed in the public schools?
- What is the effect on vocational students? academic students?

The instructor should present the transparency titled Vocational Education and the Workforce of the 1990s and have the class discuss the following questions:

- How does the integration of academic and vocational education relate to these issues?
- What is the vision of vocational education? academic education?

Debriefing Strategies

The instructor should ask the learners to discuss the following questions:

- What is the counselor's role in promoting the integration of academic and vocational education?
- What are the implications of integration for school counseling and guidance programs?
- What "basic skills" were used in completing this lesson?

Possible Resources

- The William T. Grant Foundation Commission. (1988, February). A report on noncollege bound youth in America. Phi Delta Kappan, 69(6), 408-414.
- The Integration Issue. (1991, September). Phi Delta Kappan, 73(1).
- Goodlad, J.I. (1985, December). The great American schooling experiment. Phi Delta Kappan, 67(4), 266-271.
- The Basic Skills in Vocational Education Issue. (1989, October). Vocational Education Journal, 64(7).
- Oakes, J., & Lipton, M. (1990). Chapter 7: Tracking: An old solution creates new problems. In Making the best of schools. New Haven, CT: Yale University Press.

Individualized Learning Plan

If a learner is studying this content in an individualized program, he or she should be given the entire lesson. The learner should read all materials and complete all assignments and activities. Written responses in the form of a paper can be used to verify completion of the lesson. Note: As part of this learning experience, the learner should be asked to identify a counselor in the schools with whom to discuss the questions and issues of the lesson.

INSTRUCTOR RESOURCES

LESSON: TENETS AND ISSUES OF INTEGRATION

Issues of Education (1)

"If our standard of living is to be maintained, if the growth of a permanent underclass is to be averted, if democracy is to function effectively into the next century, our schools must graduate the vast majority of their students with achievement levels long thought possible for only the privileged few."

...Carnegie Task Force on Teaching as a Profession, 1986

Issues of Education (2)

"The essence of this consensus is that all students, whether or not they intend to go to college, require education that is at least equivalent in function to what the common elementary school provided at the turn of the century."

"There are no significant differences between the kind of formal schooling required to prepare for entry into higher education and the kind required to prepare for entry into the workforce."

John Goodlad[2]

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[2](1985, December). The great American schooling experiment. Phi Delta Kappan, 67(4), 266-271.

Suspect Practices (1)

"Schooling research is increasingly suggesting that the traditional tracking of students into academic, general, and vocational programs has led to unequal opportunities to learn and has done a disservice to many students in our schools."

Jeannie Oakes[3]

[3]Jeannie Oakes, NCRVE (Teleconference Statement).

Suspect Practices (2)

"Students pursuing vocational studies in the typical American high school are not required or even encouraged to take those academic courses — communication, mathematics, and sciences — that provide the foundation of knowledge for their vocational field. Rather than taking a coherent sequence of academic courses that would complement their vocational studies, students are allowed to select courses which contribute little to developing and advancing needed basic competencies. This random selection is allowed in spite of evidence that advancement beyond entry level jobs requires the ability to continue to learn and apply higher level communication, math, and science competencies."

Gene Bottoms[4]

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[4]Bottoms, J. E. (1989, February). Closing the gap between vocational and academic education. Washington, DC: Policy Studies Associates, Inc. (ERIC Document Reproduction Service No. 305 516)

Vocational Education and The Workforce of the 1990s

"Significant changes will affect the workforce during the next decade ... a strong demand for workers will create unparalleled opportunities ... To seize these opportunities, however, workers will need higher skill levels. Jobs will be more complex than ever before. They will demand better command of reading, writing, reasoning, and mathematics."

"Evidence suggests that many young people are not prepared for present positions, let alone the more challenging jobs of the future."

"Vocational education cannot fulfill its promise if it remains static. It must adapt to changed workplace demands. The mission of vocational education clearly needs to be redefined. Its traditional role — training a high school student to do a specific job — is no longer viable."

Elizabeth Dole[5]

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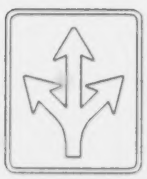
[5]Dole, Elizabeth. (1989, October). Preparing the work force of the future. Journal of Vocational Education, 64(7), 18-20.

MODELS OF INTEGRATION

Perennial Problem

How can comprehensive school counseling and guidance programs contribute to the delivery of the basic skills?



Practical Problem

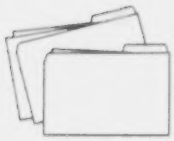
What should be done about (1) school counselors' understanding of the tenets associated with combining academic and vocational education and (2) integrating basic skills into vocational education?

Justification for Lesson

The term "integration" has a variety of meanings. The purpose of this lesson is to help school counselors understand different integration models, including their purposes, sources of support, and expected outcomes.

Learner Outcome

The learner will understand the proposed models of integration.



Instructor Resources

- Carl Perkins Amendments of 1990 (transparency)
- Sources of Support (transparency)
- Purposes of Integration (transparency)
- Models of Integration (handout)
- Models of Integration (transparency)
- Potential Results of Integration (transparency)

Teaching-Learning Interaction

The instructor should preassign the learners to read the following article:

Grubb, W.N., Davis, G., Lum, J., Plihal, J., & Morgaine, C. (1991, August). "The cunning hand, the cultured mind": Models for integrating vocational and academic education. Berkeley, CA: National Center for Research in Vocational Education, University of California.

The instructor should begin the lesson with a review of the transparency titled Carl Perkins Amendments of 1990. The instructor should inform the learners about the Carl Perkins legislation and its role in vocational education.

The instructor should then discuss with the class the transparencies titled Sources of Support and Purposes of Integration.

Next, the instructor should distribute the handout titled Models of Integration to assist in the discussion of the transparency titled Models of Integration. The discussion should focus on the models presented and the learners' experience with them in the public schools.

The instructor should conclude the lesson by having the learners process the statements on the transparency titled Potential Results of Integration.

Debriefing Strategies

The instructor should ask the learners to discuss the following questions:

- Where are basic skills taught in the high school curriculum?
- Who decides where and how basic skills are taught in the high school curriculum?
- What are the implications of different models of integration for teaching the basic skills?
- What are the implications of different models of integration for school counseling and guidance programs?
- What is the counselor's role in the integration of vocational and academic education?

Possible Resources

- Willis, S. (1991, September). Vocational education: Applied academics, tech prep programs serve the 'forgotten half'. Curriculum Update. Alexandria, VA: Association for Supervision and Curriculum Development.
- Bottoms, G., & Presson, A. (1989). Improving general and vocational education in the high schools. SREB-State vocational education consortium approaches for achieving gains in the mathematics, science, and communications competencies of students in general and vocational programs. Atlanta, GA: Southern Regional Education Board.
- DeRidder, L.M. (1989). Integrating equity into the school. Career Development: Preparing for the 21st Century. Ann Arbor, MI: ERIC Counseling and Personnel Services, School of Education, The University of Michigan.
- Arni, T., & Bancroft, M. (1990). Integrating the guidance curriculum into language arts. Available from: Thomas Arni and Michael Bancroft, Rock Bridge High School, Columbia, MO.

Possible Resources, continued

- Hull, D., & Parnell, D. (1991). Tech prep associate degree: A win/win experience. Waco, TX: Center for Occupational Research and Development.

- Video: Focus on education. (1991). New Bedford, MA: Media Image Productions, Inc.

Individualized Learning Plan

If a learner is studying this content in an individualized program, he or she should be given the entire lesson. The learner should read all materials and complete all assignments and activities. Written responses in the form of a paper can be used to verify completion of the lesson. Note: As part of this learning experience, the learner should be asked to identify a counselor in the schools with whom to discuss the questions and issues of the lesson.

INSTRUCTOR RESOURCES

LESSON: MODELS OF INTEGRATION

Carl Perkins Amendments of 1990[1]

"Funds made available ... shall be used to provide vocational education in programs that ... integrate academic and vocational education in such programs through coherent sequences of courses so that students achieve both academic and occupational competencies."

[1] NCRVE — U.C. Berkeley.

Sources of Support[2]

Policymakers trying to improve the workforce;

Business representatives facing labor shortages and demanding "higher order thinking skills;"

Educators concerned with low levels of basic skills;

Vocational educators searching for new roles;

Critics of vocational education decrying "narrow vocationalism;"

Critics of academic education, including cognitive scientists.

Consequences:

Multiple purposes
Conflicting goals
Multiple models or approaches

[2] NCRVE - U.C. Berkeley

Purposes of Integration[3]

Reforming vocational programs:

- **Remediating instruction for vocational students**
- **Enriching academic instruction for vocational students**
- **Creating innovative occupational programs**
- **Promoting a new conception of vocational education**
- **Linking high school programs to postsecondary education: 2+2 and tech prep programs**

Assisting the vocational decisions of all students:

- **Creating career guidance in new forms**

continued ...

[3] NCRVE — U.C. Berkeley

Purposes of Integration[4], continued...

Reforming the high school for all students:

- **Eliminating the "shopping mall high school"**
- **Improving teaching methods and connections among courses**
- **Enhancing the engagement of students**
- **Reducing the isolation of teachers**
- **Reducing tracking and segregation of students**
- **Providing a vision of business participation**

[4] NCRVE — U.C. Berkeley

Models of Integration

Model 1: Incorporating academic competencies into vocational courses

- Is the simplest form of integration.
- Relabels the informal reinforcement of basic academic skills in vocational classes.
- Uses developed curriculum materials which identify academic competencies.
- Stresses simple or lower level academic competencies.
- Does nothing to change the separation between academic and vocational teachers, programs, and students.
- Is taught by vocational teachers.

Model 2: Combining academic and vocational teachers

- Initiates the teaching of academic competencies in vocational programs by academic teachers.
- Assigns academic teachers to an area vocational school part or full time to team teach with vocational teacher.
- Retains its strength in collaboration.
- Gives status to academic skills through presence of academic teacher.
- Is remedial in academic content.

Model 3: Making academic curriculum more vocationally relevant

- Incorporate vocational examples into academic courses.
- Resembles the "career ed" movement.
- Introduces specific new courses (i.e., "applied academics").
- Substitutes for lower level academic courses.
- Substitutes as an elective curriculum, retaining current course offerings.
- Is most popular form of integration.
- Must be linked to vocational programs and teachers for true integration to take place.

Model 4: Modifying academic and vocational education - curriculum "alignment"

- Changes the content of both academic and vocational courses.
- Coordinates existing teachers and courses.
- Relies on locally developed curricula or modified "off the shelf" curricula.
- Incorporates elements from Models 2 and 3.
- Uses Applied Academic materials.
- Incorporates teacher collaboration and student mixing.
- Utilizes cooperative learning.

Models of Integration, continued

Model 5: Academy model

- Operates as schools within schools.
- Incorporates teacher collaboration.
- Encourages work between student and teacher groups.
- Fosters business and industry relationships.
- Motivates potential drop outs.
- Does not reduce tracking of students.

Model 6: Replacing conventional departments with occupational clusters

- Replaces conventional departments.
- Organizes departments along occupational lines.
- Recommends specific course sequence through career cluster departments.
- Promotes teacher collaboration.
- Reduces "turfism".
- Expands the Academy Model.
- Reduces tracking of students.

Model 7: Single occupation high schools

- Emphasizes school wide occupation.
- Makes academic instruction more vocational.
- Reduces student tracking.
- Promotes opportunities for teacher collaboration.

Model 8: Electing career paths or occupational majors

- Uses occupational cluster as in Model 7, retaining conventional departments.
- Allows students to select a "career path" to follow.
- Integrates career related information into academic subjects.
- Reduces "curriculum cafeteria" approach.

Law, D. A., & Pepple, J. D. (1990, November). Integrated curriculum: A nationwide perspective and Integration models that are working. Paper presented at the Curriculum Integration in an Outcome-Based System: Making the Mission Reality meeting, Greeley, CO.

Models of Integration[5]

1. Incorporating academic competencies into vocational courses
2. Combining academic and vocational teachers
3. Making academic curriculum more vocationally relevant
4. Modifying academic and vocational education — curriculum "alignment"
5. Academy model
6. Replacing conventional departments with occupational clusters
7. Single-occupation high schools
8. Electing career paths or occupational majors

[5] From: Law, D., & Pepple, J. (1990, November).

Potential Results of Integration[6]

- Basic skills and academic content can increase
- Vocational courses can become more rigorous
- Academic teaching can improve
- Collaboration among teachers and excitement about teaching and learning can grow
- The curriculum can become more coherent
- Patterns of tracking and segregation can break down

[6] NCRVE — U.C. Berkeley

BASIC SKILLS

Perennial Problem

How can comprehensive school counseling and guidance programs contribute to the delivery of the basic skills?

Practical Problem

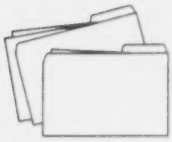
What should be done about school counselors' knowledge of the various definitions of basic skills and their impact on curriculum design and content?

Justification for Lesson

The term "basic skills" is being used more and more when education professionals discuss curriculum development and school restructuring. These skills now encompass much more that the traditional Three R's. As this lesson makes clear, school counselors need to clarify their role in helping students plan their coursework in a way that ensures their acquisition of the contemporary competencies now collectively referred to as "basic skills."

Learner Outcome

The learner will identify and integrate appropriate student basic skills into a comprehensive counseling and guidance program.



Instructor Resources

- Feller, R., & Daly, J. (1992). Comprehensive counseling and guidance programs: Delivering the basic skills. Fort Collins, CO: Colorado State University. (handout)
- The Missouri Comprehensive Guidance Model (handout)
- Visit Interview Form (handout)
- The Four Components of Comprehensive Counseling and Guidance Programs (handout)
- Beyond the Three R's (3 handouts)
- The Twelve Competency Categories of the National Career Development Guidelines (transparency)

Teaching-Learning Interaction

The instructor should preassign the learners to read the following two handouts:

- Feller, R., & Daly, J. (1992). Comprehensive counseling and guidance programs: Delivering the basic skills. Fort Collins, CO: Colorado State University.
- The Missouri Comprehensive Guidance Model

The instructor should also preassign each learner to arrange 30-minute interviews with two school counselors (one from the level in which he or she wishes to be employed and one from either a middle or high school). Each learner should ask the two counselors the questions on the handout titled Visit Interview Form.

Teaching-Learning Interaction, continued

The instructor should begin the lesson by asking the learners to respond to the following question: "As future school counselors, what role will you be expected to play in helping students acquire the basic skills?"

Next, the instructor should review the handout titled The Four Components of Comprehensive Counseling and Guidance Programs and ask the learners to discuss the purpose and status of the guidance curriculum within schools.

The instructor should then distribute and review the handouts titled Beyond the Three R's, which suggest that the basic skills include skills beyond the traditional Three R's.

The instructor should then ask the learners to circle on the handouts titled Beyond the Three R's those "basic skills" that could be delivered within a guidance curriculum.

Next, the instructor should review the transparency titled The Twelve Competency Categories of the National Career Development Guidelines. The instructor should point out that these 12 categories include competencies that school districts use when developing guidance curricula within comprehensive counseling and guidance programs.

The instructor should then have the learners compare the skills they circled on the handout titled Beyond the Three R's to the competency categories on the transparency titled The Twelve Competency Categories of the National Career Development Guidelines to identify similarities between the two lists. *Note:* It is meant to be implied that there is a strong relationship between the suggested basic skills and the competencies said to be delivered through counseling and guidance programs.

Next, the instructor should divide the class into pairs, asking each pair to role play, with one person serving as a principal and the other a school counselor. The principal (who may refer to the handout titled Beyond the Three R's) should instruct the counselor as to how the "basic skills" include more than the three R's. The counselor should then instruct the principal on how many of the basic skills can be integrated into the guidance curriculum to facilitate student achievement.

Debriefing Strategies

The instructor should ask the following questions:

- To what degree did your school experience teach you "basic skills" beyond the three R's?
- How does the presence or absence of a counseling and guidance curriculum affect student achievement of the basic skills?
- How do you expect teachers to respond to your willingness to help them facilitate student acquisition of the basic skills?

Possible Resources

- Daggett, W. (1991, August 1). Identifying the skills students need for success in the workplace: Implications for curriculum and assessment. Schenectady, NY: Author.
- Gysbers, N., & Henderson, P. (1988). Developing your school guidance program. Alexandria, VA: American Association of Counseling and Development.
- Ellis, T. (1991). Guidance — The heart of education: Three exemplary approaches. (Digest #70). In G. Walz (Ed.), (1991). CounselorQuest: Concise analyses of critical counseling topics. Ann Arbor, MI: ERIC Counseling and Personnel Services Clearinghouse, School of Education, The University of Michigan.
- Arni, T., & Bancroft, M. (1990). Integrating the guidance curriculum into language arts. Columbia, MO: Rock Bridge High School.
- Videotape: The changing workplace — Self management. (1992). Bloomington, IN: Agency for Instructional Technology.

Individualized Learning Plan

If a learner is studying this content in an individualized program, he or she should be given the entire lesson. The learner should read all materials and complete all assignments and activities. Written responses in the form of a paper can be used to verify completion of the lesson. Note: As part of this learning experience, the learner should be asked to identify a counselor in the schools with whom to discuss the questions and issues of the lesson.

INSTRUCTOR RESOURCES

LESSON: BASIC SKILLS

Comprehensive Counseling and Guidance Programs: Delivering the Basic Skills

by Rich Feller and Joseph Daly[1]
Colorado State University

In a time of school restructuring and global workplace transformation, students still ask their counselors, "Why do I need to take that course?" The counselor's well-informed answer can help steer students toward courses that will provide them with the basic skills they need to succeed not just in school but at work and in their personal lives.

Today's well-informed, effective school counselor is increasingly committed to the concept of comprehensive counseling and guidance programs, which provide counseling and guidance services to all students, not just those who are college-bound or in crisis. Consequently, these comprehensive programs provide for increased counseling and guidance services to vocational education students. School counselors working in comprehensive counseling and guidance programs could therefore play a key role in assuring that vocational education students receive the basic skills instruction so critical to their future personal and professional success. This article suggests that, in the area of basic skills acquisition, a new role is emerging for both school counselors and comprehensive counseling and guidance programs.

What Have Counselors Been Doing?

What are school counselors doing? Most national school reform studies fail to offer even minor acknowledgement of counselors and/or guidance professionals; yet, school counselors have long argued for changes in school structure, programmatic guidance efforts, and curriculum reform, as well as academic and vocational education integration. Faced with the consequences of students not perceiving a relationship between school and their futures, and curriculum unresponsive to an increasing number of students, counselors have argued for applied learning, workbased learning, attention to learning style differences, career planning, and course relevancy.

Counselors recognize that employers today demand skills that students can only acquire through a challenging and focused high school educational program. They have learned that debating the merits of vocational education over college prep is both useless and irrelevant. More than ever, students need both vocational and academic competencies to prepare themselves for employment in more than "dead end" jobs. Counselors recognize that the skills necessary for lifelong learning and successful long term employment are the same.

Often criticized for their detachment from vocational programs, counselors are

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[1]Rich Feller and Joseph Daly are Professors of Counselor Education in the School of Occupational & Educational Studies at Colorado State University in Fort Collins, Colorado.

expected to perform roles as varied as the schools within which they work. Some are advocates for students confronting severe family and social changes, while others are saddled with large amounts of "administrivia." Still others confront substance abuse, suicide, and teen pregnancy as regular parts of their day. In light of this workload, an increasing number of school counselors argue that quality curriculum choices, along with a developmental guidance curriculum and adequate planning help, are not available to all. These laments, which are not new, underscore the need to clarify priorities if school counselors and comprehensive counseling and guidance programs are to exist and meet increased demands.

Comprehensive Counseling and Guidance Programs

Ironically, just when accountability has left many counselors vulnerable and even displaced, guidance technology has become quite sophisticated through the leadership of Norm Gysbers and his associates (1988).

The idea of comprehensive counseling and guidance programs is increasingly replacing the traditional counselor/clinical services model. This model features the concept of position, with the role and function of the counselor kept remote from the instructional role and function of the school. Comprehensive counseling and guidance programs differ from the traditional counselor/clinical services model by emphasizing that the work of the counseling and guidance team should include four components: guidance curriculum, individual planning, responsive services, and system support.

Gysbers has long argued for guidance to be defined as an organized, outcome based and accountable part of education, as opposed to being defined in terms of what counselors in positions do. This change from position to program as the basic organizer for guidance in the schools represents a paradigm shift for school counselors, as it removes them from non-guidance activities.

Considerable changes in the expectations of principals and staff are required, as is a clear understanding of five basic axioms upon which the program concept rests:

1. Guidance is a program with learner outcomes.
2. Guidance and counseling programs are developmental and comprehensive.
3. Guidance programs focus on individuals' competencies, not just their deficiencies.
4. Guidance and counseling programs are built on a team approach.
5. Guidance and counseling programs mandate linkages and articulation.

As school counselors are trained in this model, one can expect that counseling and guidance programs will receive greater acknowledgement from those who are restructuring schools. As curriculum reform incorporates an expanded definition of the basic skills, counseling and guidance as a program, and counselors as educators, will be counted upon to help students acquire these critical skills.

Delivering the Basic Skills, continued

The Basic Skills

Today, the skills needed to be an effective worker, family member, and lifelong learner are becoming more sophisticated and are no longer covered by the traditional "three R's." Workplace basics now include skills long promoted within the guidance curriculum and advanced in the career education movement (Hoyt, 1980). Process skills (group effectiveness, goal setting, problem solving, etc.), highlighted by the American Society for Training and Development (Carnevale et al., 1988), and personal qualities (individual responsibility, self esteem, sociability, etc.), promoted by the Secretary's Commission on Achieving Necessary Skills (SCANS, 1991) acknowledge that student and worker success depend on more than job specific training and improved SAT scores. While "the basics" are debated and defined, and America 2000's six national education goals lead the reform agenda, the guidance community embraces the National Career Development Guideline Competencies, developed by the National Occupational Information Coordinating Committee (NOICC, 1989), as complementary to "the new basics."

The Twelve Competency Categories of the National Career Development Guidelines[2]

1.	Knowing the importance of self concept and learning the skills to maintain a positive one.
2.	Skills to interact positively with others.
3.	Understand change, growth, and transitions.
4.	Understand the relationship between education and career opportunities.
5.	Develop positive attitudes and skills to participate in work and lifelong learning.
6.	Locate, evaluate, and interpret career information.
7.	Job seeking and changing job skills.
8.	Understand how society's needs and the economy influence the structure of work.
9.	Learn to make decisions.
10.	Understand the interrelationship of work and life roles.
11.	Understand changes in male/female roles and their impact on occupations.
12.	Understand career planning and be able to make transitions.

Evidence continues to demonstrate that a competency based counseling and guidance curriculum teaches many of the basics needed for success in work, school, and home, as well as the skills and knowledge needed to make sound curriculum choices.

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[2]NOICC, 1989.

Delivering the Basic Skills, continued

The Selling of Vocational Education

In the past, vocational funding sometimes led counselors to sell vocational education and workbased learning as alternatives to academic class selections. This may have meant promoting vocational programs in a manner insensitive to both rapid changes in the economy and the basic skills needs of the workplace. Counselors focusing on the needs of students more than enrollment quotas were caught between (1) parental demands that students complete the seat time in academic courses to qualify them for admission to the state university and (2) vocational teachers' concern about decreasing vocational enrollments. Faced with this dilemma, and recognizing the need to better educate all students, counselors have indicated that vocational education is best promoted when vocational and academic education are seen as complementary strategies for student success, not as competing programs of study.

An example: The school district in Pittsburgh, Pennsylvania, has discontinued its general education track. With the general track gone, students need to make specific curriculum choices early on. This has made it necessary for guidance professionals to contact all students earlier and stay in contact with them. Each student in the Pittsburgh schools must plan and complete a focused curriculum leading to an academic or an applied technology and career development certificate, or both, before they can receive a diploma. To inform the community about the methods the district is using to infuse career education into curriculum, the district sends letters to parents of all eighth graders, and requires all tenth graders to view a video explaining graduation and certificate requirements within a group guidance class. Counselors now find it much easier to promote the merits of Pittsburgh's 40 vocational options and their relation to graduation, the workplace, and postsecondary education. This action, along with other initiatives, has significantly reduced dropout rates (personal communication, Fred Monaco, Division of Applied Technology and Career Development, 1991).

Planning Course Sequences

Schools that focus on acquisition of the "basic skills" recognize the critical role counselors play in helping students plan a demanding sequence of academic and vocational courses that prepares them both for employment and postsecondary education.

Gene Bottoms of the Southern Regional Education Board has stated that "every counselor knows the courses needed for students planning to go to college, but few can list the vocational and academic courses needed to pursue a technical career in electronics" (personal communication, 1990). He (Bottoms, 1989; Bottoms & Korcheck, 1989) argues that counselors can improve student planning and basic skills acquisition by:

1. rewriting student literature concerning school requirements to reflect a course of study adequate for both employment and postsecondary learning;

Delivering the Basic Skills, continued

2. developing programs orienting students, parents, and teachers to the skills needed within the workplace and postsecondary education;
3. providing all students with an interest and aptitude assessment annually, starting no later than the eighth grade, to assist students in planning meaningful four year educational programs;
4. encouraging general and vocational students to pursue either a more rigorous academic and vocational program of study, or a more rigorous program of academic studies concentrated in at least one academic field; and
5. finding ways to get academic and vocational teachers to encourage students to take more math, lab science, and higher level courses.

New Guidance Efforts

Traditionally, counselors have responded to students who knew they had career needs. Little attention has been given to what has been called the "forgotten half" (William T. Grant Commission on Work, 1988) or the "neglected majority" (Parnell, 1985). The quality of U.S. school-to-work programs — programs which might particularly help this segment of students — was ranked last in the industrial world (U.S. Government Accounting Office, 1990). Without a comprehensive counseling and guidance program to address the needs of all students, most students receive little counseling and guidance assistance, or none at all.

All of this has fostered the need for outcome based comprehensive counseling and guidance programs. Efforts to address (1) the shortcomings of career guidance and (2) the limited commitment to planning a coherent and challenging program of vocational and academic study, are being supported by the Perkins Act, NOICC, and state and local initiatives.

Two examples of school districts that have implemented comprehensive counseling and guidance programs follow.

1. The National Career Development Guidelines led to Neptune, New Jersey's adoption of a career development curriculum. Before developing lesson plans for each grade level, curriculum developers used the Guidelines to identify the competencies needed by all middle and high school students. Consequently, in the sixth through eighth grades, the school guidance program focuses on the importance of a positive self concept, acquainting students with the world of work, and emphasizing the importance of planning for the future (personal communication, Russ Walling, 1991).

2. In Delta County, Colorado, where a nationally recognized technology based education program has been developed, counselors utilized the National Career Development Guideline Competencies and computer technology in each of their four high schools to produce a nine module, self directed career development exercise as part of the district-wide comprehensive counseling and guidance program. Using Hypercard, the Discover Career Information Delivery System, a laser disc player, and computer, all

freshmen create a career development plan, explore three out of a possible 12,000 vocational options, and access listings to postsecondary schools nationwide. Students also use an interactive laser disc program called "Attributes of Employability," complete a computerized job application, write a resume, and maintain their progress and grades (Feller & Daly, 1992).

The True Test of School Counseling and Guidance

As Jeanne Bleuer says, "The school counselor is foremost an educator supporting students in their progress through school and serving as a crucial resource for the academic program" (1989, p. 23). Comprehensive counseling and guidance programs can support school counselors in this role, helping counselors teach students how to plan their futures and acquire the basic skills needed for lifelong success.

The increasing focus on integrating academic and vocational coursework is leading toward a more demanding and focused program of study for every student. This, in turn, should lead to a higher premium being placed on counseling, guidance, and planning services for students. Fortunately, as its role in schools evolves and grows, the counseling and guidance community has solid comprehensive counseling and guidance models ready to implement.

The changes in the school counselor's role will demand counselors who are well informed about how they can help students learn to plan their futures and acquire the basic skills needed for lifelong success. Helping teachers help students acquire these skills will strengthen the counselor's role in schools. In this age of accountability, dovetailing school counseling services with school teaching services to enhance the relevance of secondary education is a positive move for all concerned.

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The Missouri Comprehensive Guidance Model[3]

Thomas I. Ellis

Overview

Traditional organizational patterns for school guidance have emphasized the position and duties of the counselor or the therapeutic process of counseling, at the expense of a coherent programmatic focus. As a consequence, guidance has been widely regarded as an ancillary support service, rather than as an integral part of education. This pattern has placed counselors in a remedial and reactive role, a role in which their duties were ill defined, large blocks of time were spent working with a small number of students, and they were likely to be saddled with extra administrative and clerical duties, such as scheduling and record keeping.

In response to this widespread lack of an appropriate organizational structure, Norman C. Gysbers and associates at the University of Missouri (Columbia) developed a Comprehensive Guidance Program Model that has been adopted by schools and statewide educational agencies throughout the country, from Alaska to New Hampshire (Starr & Gysbers, 1988). The purpose of the model is to help districts develop comprehensive and systematic developmental guidance programs, kindergarten through grade twelve. It is also to provide guidance with specific educational content, with accountability for attaining certain student competencies. When fully implemented, the program allows counselors to devote all their time to the program, thus eliminating many of the nonguidance related tasks that they now carry out.

What Are the Components of the Program?

The Missouri Comprehensive Guidance Program Model has two major parts: **structural** and **programmatic.** The **structural** part has five components: Definition and Philosophy, Facilities, Advisory Council, Resources, and Staffing Patterns and Budget. This part addresses administrative aspects of the program that do not involve contact with students, but are essential in maintaining the administrative and structural integrity of the overall program.

The **programmatic** part has four components: Guidance Curriculum, Individual Planning, Responsive Services, and System Support. The Guidance Curriculum consists of structured developmental experiences presented systematically through classroom activities to provide students with knowledge of normal growth and development and to promote good mental health and assist them in acquiring life skills. The curriculum is organized around (1) career planning and exploration; (2) knowledge of self and others; and (3) educational development.

The Individual Planning component consists of activities that help all students set goals, plan, and manage their own learning, as well as their personal and career development. Conversely, the Responsive Services component consists of activities to meet students' immediate needs and concerns, whether these require counseling, consultation, referral, or information.

The System Support component consists of management activities that establish, maintain, and enhance the guidance program as a whole through professional development, staff and community relations, consultation with teachers, advisory councils, community outreach, program management, and research and development.

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[3]Ellis, T. I. (1990). The Missouri comprehensive guidance model. In Highlights...An ERIC/CAPS Digest. Ann Arbor, MI: Counseling and Personnel Services Clearinghouse.

The Missouri Comprehensive Guidance Model, continued

What is the content of the Comprehensive Guidance Program Model?

The Comprehensive Guidance Program Model is predicated on the concept of life career development, defined as self development through the integration of roles, settings, and events in a person's life (Gysbers & Moore, 1975). (The concept of "career" refers to one's whole life, and not just occupation.) The program emphasizes three domains of human growth in life career development: self knowledge and interpersonal skills; life roles, settings, and events; and life career planning.

In the self knowledge and interpersonal skills domain, the focus is on helping students to understand and accept themselves and others, and to become aware of their personal characteristics — interests, aspirations, and abilities. Through learning about the interactive relationship of self and environment, they learn how to create and maintain relationships, and they develop personal standards and a sense of purpose in life.

The second domain emphasizes various life roles (learner, citizen, consumer), settings (home, school, work, and community), and events (job entry, marriage, retirement) in which students participate over their life span. This domain focuses on the sociological, psychological, and economic structure of their world, and encourages students to overcome stereotypes and plan for the future.

The Life Career Planning domain is designed to help students understand that decision making and planning are important tasks in everyday life. Students learn of the many occupations and industries in the work world. Students also develop skills in gathering information from relevant sources and using that information to make reasoned decisions. Students are also encouraged to assess their personal values as these relate to prospective plans and decisions.

Who Should Be Involved in the Program?

Counselors, teachers, administrators, parents, students, community members, and business and labor personnel all have roles to play as human resources in the guidance program. While counselors provide the services and coordinate the program, they must enlist the involvement, cooperation, and support of teachers and administrators for the program to be successful, for the program is predicated on an assumption that guidance is central to the educational process. To involve parents, community members, and business and labor personnel, a school community advisory committee can be formed to provide recommendations and support services to counselors and others involved in the program.

The involvement of the teaching staff is critical, so teachers should have the opportunity to volunteer for active participation in program planning and implementation. Counselors and teachers should work together to plan the delivery of the guidance curriculum, so that guidance learning activities are presented in the appropriate content areas, and so that teachers do not feel displaced by counselors in the classroom.

What Facilities Are Needed?

Furthermore, to make the guidance curriculum, individual planning, responsive service, and system support components function effectively, the program requires a new way to organize guidance program facilities. Besides the usual individual offices for one to one counseling sessions, the program requires reorganization of space into a guidance center, which brings together guidance information and resources and makes them accessible to students. Such a center could also be used for such activities as group sessions and self exploration. The guidance center could also include a library and/or computerized database, providing advice and

The Missouri Comprehensive Guidance Model, continued

materials for career planning, educational opportunities, community involvement, and recreational opportunities.

How Can Schools Best Implement a Comprehensive Guidance Program?

Step 1. Sell the model to the counselors in the department, since those participating in it must feel some ownership. According to Gloria Morgan, who has implemented the Missouri model in two high schools, approximately three years is needed to implement a comprehensive guidance program (Gysbers, 1990). Because many counselors and administrators resist change, it is essential to lay the ground work for implementation by thoroughly discussing the program in advance with all affected staff members.

Step 2. Develop an inservice workshop for teachers, so that faculty will understand and support the purposes of the Comprehensive Guidance Program.

Step 3. Launch a public relations program to inform students, parents, and the community about proposed changes in the guidance program. This can be done through workshops, talks at local civic groups, newspaper articles, and even local television spots.

Step 4. Conduct a thorough assessment of the current guidance program, including available resources, both human and financial. This means evaluating the time and task allocation of the counseling staff and taking inventory of materials.

Step 5. Conduct a needs assessment, including a survey of students, parents, and teachers, in order to help counselors identify important program categories and competencies in the three major areas around which the guidance curriculum is organized: career planning and exploration, knowledge of self and others, and educational and vocational development. The self assessment and need evaluation both provide baseline information to use in designing the new program along the lines of the model, but in a way that addresses the needs of each school.

Step 6. Develop the guidance curriculum, introducing specific competencies sequentially. In the initial planning stages of the curriculum, it is best to concentrate on cooperative departments and teachers and to plan the entire year's curriculum in advance, if possible. The guidance curriculum is usually the difficult part of the program to implement, because it must fit in with existing curricular constraints and must overcome the reluctance of teachers to give up class time or to alter and supplement their existing instructional plans. It is thus essential to seek administrative support, be well organized, and give teachers as much advance notice as possible.

Step 7. Establish a coherent annual evaluation procedure that assesses attainment of student competencies, personnel performance, and the achievement of program.

In Summary

According to Gysbers and Henderson (1988), the Comprehensive Guidance Model is intended, above all, to lead to guidance activities and structured group experiences for all students, and to deemphasize administrative, clerical tasks, reliance on reactive personal counseling, and limited accountability. To full implement the model program, it is essential that all constituencies understand the following characteristics:

- that the program is oriented toward overall student development, rather than ad hoc crisis management;
- that the four programmatic components constitute 100% of the counselor's activities, with no add ons;
- that guidance is an integral part of the overall curriculum, and not an ancillary service;

The Missouri Comprehensive Guidance Model, continued

- that the focus is on the program, rather than the counselor's position, and on education, rather than clinical or agency based assistance.

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VISIT INTERVIEW FORM:
The Basic Skills, Guidance Curriculum, and Work Based Learning

Interviewer _____

Interviewee's Title and School Level _____

Suggested Questions

1. What role are you expected to play in helping students achieve the basic skills?

2. Which of your professional activities relate directly to students' achievement of the basic skills?

3. Some school reform advocates suggest that a return to the traditional basics of reading, writing, and math is the best way to help all students succeed in the workplace, home, and in future learning. To what extent do you agree? Are there additional "basic skills" that you feel all students must have to succeed in these areas of their lives?

4. One model of comprehensive counseling and guidance programs (advocated by Norm Gysbers and colleagues) is said to include four components: 1) guidance curriculum, 2) individual planning, 3) responsive services, and 4) system support. To what degree do most school guidance programs incorporate these four components?

5. To what degree does your school follow the Gysbers model?

6. What is the purpose of the guidance curriculum in your school, and what are the expected outcomes?

7. Some would argue that the basic skills definitely need to include skills beyond reading, writing, and math, and that students need to leave school with an expanded set of contemporary "basic skills" if they are to be effective and successful in life. (The interviewer should share the handout titled Beyond the Three R's with the interviewee.) Are any of these skills included in your school guidance curriculum? (If they are not, or if this school does not have a guidance curriculum, ask the interviewee which of these basic skills should be addressed in the ideal guidance curriculum.)

8. To what degree can it be argued that the school guidance curriculum plays a significant role in enhancing student achievement of the "basic skills"?

The Four Components of Comprehensive Counseling and Guidance Programs[4]

1. The **Guidance Curriculum** consists of structured developmental experiences presented systematically through classroom and group activities and is often organized around the three NOICC content areas: Self Knowledge, Educational and Occupational Exploration, and Career Planning.

2. **Individual Planning** consists of activities that help all students plan, monitor, and manage their own learning, as well as their personal and career development.

3. **Responsive Services** consist of activities to meet immediate needs and concerns of students through counseling, consultation, referral, or other information.

4. **System Support** consists of management activities that establish, maintain, and enhance the total guidance program.

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[4]From Norm Gysbers and the Missouri Comprehensive Guidance Program.

Beyond the Three R's

Workplace Basics[5]

- **Learning to Learn**
- **Reading, Writing, and Mathematics**
- **Communication**
- **Adaptability:** ***Creative and Critical Thinking, Problem Solving***
- **Personal Management:** ***Self-Esteem, Goal Setting/Motivation, Personal/Career Development***
- **Group Effectiveness:** ***Interpersonal Skills, Negotiation, and Teamwork***
- **Influence:** ***Organizational Effectiveness and Leadership***

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[5]Adapted from: Carnevale, A. P., Gainer, L. J., & Meltzer, A. S. (1988). Workplace basics: The skills employers want. Alexandria, VA: American Society for Training and Development. (ERIC Document Reproduction Service No. ED 299 462)

Beyond the Three R's, continued

SCANS Basics[6]

The SCANS basic skills profile is made up of five competency areas and three foundation sets of skills that are considered necessary for solid job performance. These include:

Competencies: Effective workers can productively use:

- **Resources** — allocating time, money, materials, space, and staff;
- **Interpersonal Skills** — working on teams, teaching others, serving customers, leading, negotiating, and working well with people from culturally diverse backgrounds;
- **Information** — acquiring and evaluating data, organizing and maintaining files, interpreting and communicating, and using computers to process information;
- **Systems** — understanding social, organizational, and technological systems, monitoring and correcting performance, and designing or improving systems;
- **Technology** — selecting equipment and tools, applying technology to specific tasks, and maintaining and troubleshooting technologies.

Foundation: Competence requires:

- **Basic Skills** — reading, writing, arithmetic and mathematics, speaking, and listening;
- **Thinking Skills** — thinking creatively, making decisions, solving problems, seeing things in the mind's eye, knowing how to learn, and reasoning;
- **Personal Qualities** — individual responsibility, self-esteem, sociability, self-management, and integrity.

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[6]Secretary's Commission on Achieving Necessary Skills (SCANS). (1991). What work requires of schools: A SCANS report for America 2000. Washington, DC: U.S. Department of Labor.

Beyond the Three R's, continued

New York Steering Committee[7]

BASICS

Reading
- understand written material
- follow written instructions
- put readings in context
- summarize main and subsidiary ideas
- locate specific facts and details
- differentiate fact from inference
- interpret information in charts and tables
- use operating manuals
- understand technical and abstract material

Writing
- apply rules of grammar, spelling, and punctuation
- write clearly
- write legibly
- take notes and develop outlines
- organize information into logical paragraphs
- compose letters, reports, and memoranda
- proofread and edit material
- locate sources of information
- reference sources correctly
- draft a project proposal

Speaking/Listening
- understand oral directions
- present oral information and directions
- observe verbal and nonverbal cues
- participate in a discussion

Mathematics
- add, subtract, multiply, and divide (whole numbers, fractions, decimals)
- measure using standard and metric systems
- depict relationships using tables, charts, and graphs
- apply the principles of algebra and geometry
- create and use simple statistics and probability
- solve ratio, proportion, and multiple-step problems
- estimate outcomes

EXPANDED BASICS

Thinking Skills
- problem solving
- decision making
- reasoning
- creative and critical thinking

Human Relations
- interpersonal skills
- working as a member of a team
- leadership skills
- handling conflict and criticism
- working cooperatively and competitively

Information Systems
- enter, manipulate, retrieve, analyze, and synthesize data

Organizational Skills
- goal setting
- coping with deadlines
- following directions
- setting priorities

Personal Skills
- personal work habits
- adaptability
- workplace values and ethics
- study habits
- ability to negotiate the system
- personal and civic responsibility
- initiative
- building self-esteem

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[7]Dagget, W. (1991, May 21). Colorado Community College and Occupational Education System Presentation, Denver, CO.

BEST COPY AVAILABLE

The Twelve Competency Categories of the National Career Development Guidelines[8]

1. Knowing the importance of self concept and acquiring the skills to maintain a positive one.
2. Possessing the skills needed to interact positively with others.
3. Understanding change, growth, and transitions.
4. Understanding the relationship between education and career opportunities.
5. Developing positive attitudes and skills to participate in work and lifelong learning.
6. Locating, evaluating, and interpreting career information.
7. Knowing how to look for a job, and possessing the skills needed when changing jobs.
8. Understanding how society's needs and the economy influence the structure of work.
9. Learning to make decisions.
10. Understanding the interrelationship of work and life roles.
11. Understanding changes in male/female roles and their impact on occupations.
12. Understanding career planning, and being able to make transitions.

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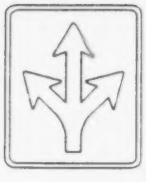
[8]NOICC.

LEARNING THE BASIC SKILLS

Perennial Problem

How can comprehensive school counseling and guidance programs contribute to the delivery of the basic skills?



Practical Problem

What should be done about school counselors' knowledge of the various definitions of basic skills and their impact on curriculum design and content?

Justification for Lesson

Research at the Institute on Education and the Economy at Teachers College, Columbia University, shows that learning is more effective when it is active, involved, and constructive. This is particularly true of learning meant to teach the basic skills. Some of the basic skills are better taught through didactic learning techniques; others are better taught through work based learning. This lesson helps learners investigate why counselors must argue for applied forms of learning which integrate the best of academic and vocational instructional methods.

Learner Outcome

The learner will possess knowledge and appreciation of those basic skills most appropriately learned through didactic instruction and those best learned through some form of work based learning.

Instructor Resources

- Newsletter: Work Based Learning (handout)
- Hoyt, K. (1990). A proposal for making transition from schooling to employment an important component of educational reform. Future choices: Toward a national youth policy, 2(2), 73-86. (handout)
- Work Based Learning Basics (transparency)
- Educational Myths and Realities (transparency)
- Educational Myths and Realities (handout)
- Learning the Basic Skills (handout)
- Learning the Basic Skills (transparency)

Teaching-Learning Interaction

The instructor should preassign the learners to read the handouts titled Newsletter: Work Based Learning and A Proposal for Making Transition from Schooling to Employment an Important Component of Educational Reform. *Note:* The articles abstracted in the Newsletter should be read in their entirety, if possible.

To start the lesson, the instructor should divide the class into groups of three and ask them to share their reactions to the preassigned readings, evaluating how the points of the readings fit with their experiences related to work based learning.

With learners still in the groups, the instructor should discuss the major tenets of work based learning from the transparency titled Work Based Learning Basics.

The instructor should show the transparency titled Educational Myths and Realities, asking the groups to guess the Reality which would correspond to each Myth. The instructor should then review the Realities listed on the handout titled Educational Myths and Realities and distribute copies of the handout to the learners.

Teaching-Learning Interaction, continued

The instructor should have the learners individually complete the handout titled Learning the Basic Skills. The instructor should then share his or her answers to the handout by completing the transparency titled Learning the Basic Skills.

Note: On the transparency, write your personal answers to the handout titled Learning the Basic Skills. Your answers, like the students', reflect personal experiences with and appreciation for work based learning. There is no set of correct answers; this exercise is meant to encourage learners to explore opportunities for work based learning.

Debriefing Strategies

The instructor should ask the pairs of learners the following questions:

- What new insights from this lesson do you have about work based learning?
- Speculate on the consequences for students if they attend a school which does not provide work based learning.
- What experiences are needed to best evaluate examples of work based learning?
- As a school counselor, how might your view of work based learning affect the curriculum choices and course selections of students?
- What is the relationship between achievement of the basic skills, work based learning, and the school counselor's role?

Possible Resources

- Berryman, S. (1988). Education and the economy: What should we teach? When? How? To whom? New York, NY: National Center on Education and Employment.

Possible Resources, continued

- Hull, D., & Parnell, D. (1991). The tech prep associate degree: A win/win experience. Waco, TX: Center for Occupational Research and Development.
- Hamilton, S. (1990). Apprenticeship for adulthood: Preparing youth for the future. New York, NY: The Free Press.
- Agency for Instructional Technology. (1992). Workplace readiness. Bloomington, IN: Author.
- Video: Would I work with me? (1988). Mansfield, OH: Opportunities for Learning.
- Video: Focus on education. (1991). New Bedford, MA: Media Image Productions, Inc.

Individualized Learning Plan

If a learner is studying this content in an individualized program, he or she should be given the entire lesson. The learner should read all materials and complete all assignments and activities. Written responses in the form of a paper can be used to verify completion of the lesson. Note: As part of this learning experience, the learner should be asked to identify a counselor in the schools with whom to discuss the questions and issues of the lesson.

INSTRUCTOR RESOURCES

LESSON: LEARNING THE BASIC SKILLS

WORK BASED LEARNING NEWSLETTER...for school counselors with an eye on basic skills

PUBLISHED BY: Rich Feller & Jean Lamm
Colorado State University
Fort Collins, Colorado

DATE: Early 1990s

This is a one time newsletter provided as part of a lesson to improve school counselor education. It provides background reading and references to materials which promote appreciation for the value of work based learning.

Apprenticeship for Adulthood

The capacity to engage in paid employment is a hallmark of adulthood. Since a productive worker requires many of the same qualities as being an active citizen and nurturant family member, preparation for work is preparation for life. Typically, a floundering period exists between high school and the mid twenties because these individuals are considered immature. Constrained employment opportunities exist, even for those who possess a diploma, due to a lack of skills.

Economic and technological forces are changing the nature of work while demographic forces are changing the workforce. Higher levels of technical knowledge and skill and well developed social skills are required. While better schools can help, a new institution is needed to connect schools to workplaces.

The best type of system would bridge school and career, adolescence, and adulthood. An apprenticeship, based somewhat on the German "dual system", integrates economic, educational, and social factors. Incorporation of the concept of *Arbeitstugende*, the German virtue of work, such as punctuality, diligence, responsibility, and receptivity to supervision will aid youth in improving their own future prospects.

"Technological change and the increasing premium on flexibility require workers to be ready for a lifetime of learning. Knowing fundamental facts and academic skills is a necessary basis for continued learning, but it is not sufficient. Youth also need to acquire habits of thought and conceptual frameworks that foster further learning, not just the ability to memorize isolated facts for an examination. Curiosity, problem solving skills, and thoughtfulness—'higher order skills'—are also required" (p. 15).

Didactic (*adj*)
1. used or intended for teaching or instruction;
2. morally instructive, or intended to be so;
3. too much inclined to teach others; **boringly** pedantic or moralistic.
...Webster's New World Dictionary (Second College Edition)

A comprehensive apprenticeship program can simultaneously supplement schooling as an alternative environment for learning and motivate youth to learn more by relating learning to work. Features of successful programs include:

1. 'Exploit workplaces and other community settings as learning environments;
2. Link work experiences to academic learning;
3. Give youth constructive roles as workers and learners simultaneously; and
4. Foster close relationships between youth and adult mentors.

Apprenticeship can remove the bonds of narrow vocational training and prepare youth for a wide range of occupations. The primary purpose is to teach academic subjects and worker virtues while on a job.

Providing the opportunity for youth to make a safe passage to adulthood can be accomplished. Integrating the reform movement in secondary schools and vocational education with corporate investment in human resources and community needs for the future can result in productive citizens.

Hamilton, S. F. (1990). Apprenticeship for adulthood: Preparing youth for the future. New York: The Free Press.

From the "Experts"

In a 1990 presentation, Secretary of Education **Lauro Cavazos** noted that future economic growth depends largely on increasing productivity by improving the skills of the American worker. Technology continues to transform the workplace, eliminating the less skilled jobs and demanding higher levels of communications, mathematics, and analytical skills. More than half the

new jobs in this decade will require postsecondary education, but not necessarily a college degree.

While federal assistance has targeted the college bound, numerous students are ...graduating without marketable skills or a solid foundation in reading, writing, and mathematical skills.

Education must ensure that noncollege bound students are given the opportunity to acquire the skills they need. For many, vocational, technical, and adult education can provide the bridge from school to work and a path to economic self sufficiency and responsible citizenship.

The closer links between education and business; applied, experience and work based learning; and new Tech Prep curricula are seen as promising strategies for addressing future needs. Some evidence suggests that the best approach to universal competency in basic skills is to integrate vocational teaching methods into applied curricula for all students. A full partnership between employers and educators can expand opportunities for all.

Dale Parnell, President and CEO of the American Association of Community and Junior Colleges, notes the educational system of the past allowed only one standard of achievement—college prep—to predominate. While we spend twice as much on these programs, only 20% of the population has a B.S. or higher degree.

The future must address more applied academics, from concrete to theoretical rather than the more traditional theoretical to concrete. Tech Prep coordinated curriculum for grades 11-14 offers tremendous potential for our future technological society.

Al Shanker, President of the American Federation of Teachers, indicates the problem of work readiness is not confined to at risk youth, but covers a large portion of youth. Incentives for performing well in school could be helpful, with good performance equating to a better position. This strategy has been successful in some other countries.

Ivan Charner, Director of the National Institute for Work and Learning, Academy for Educational Development, reports promising employment prospects await the 25% of students with college degrees, but the other 10 to 20 million youth face limited prospects for long term, productive employment and limited opportunities for life long learning.

Basic skills needed by workers include:

- Learning to learn;
- Reading, writing, and computation;
- Communication;
- Problem solving and creative thinking;
- Personal management and goal setting;
- Teamwork; and
- Leadership.

Forty to sixty percent of high school students work part time. For most, however, there is no connection between their learning and work. Capitalizing on the desire to work by designing school programs to help them get more out of these work experiences requires a commitment by employers to provide a structure of opportunity including job description, training, and continuing education.

Excerpted from The quality connection: Linking education and work, a national conference sponsored by the Secretary of Labor and the Secretary of Education, Washington, D.C., May 15-17, 1990.

Needed: An Application Rich Education

Cognitive learning research is discovering that intelligence and competence develop best out of interaction between obtaining and applying knowledge. This notion challenges some of the time honored myths of education and shatters artificial distinctions between:

- "head" and "hand" work
- academic and vocational education
- knowing and doing
- education and training
- theoretical and applied knowledge.

In 1988, officials from 121 countries concluded that postsecondary education in most countries lacks a practical focus. Education does not enable students to understand real life application of learning.

It is essential that we begin to address the needs of the 75% of the students who do not graduate from college. Tech Prep/Associate Degree programs that combine competency based teaching, articulated programs, and an excellent foundation of applied academics is one answer.

Ninety two percent of local school policy makers indicated support of the National School Boards Association of programs that encourage secondary and postsecondary schools to develop applied academics courses and better coordinate vocational technical education programs. Development of alternative definitions of excellence is essential.

Life roles remain the central and dominating force in

individuals' lives and form a context for learning. Requirements for effective functioning within roles is a starting place for discussion of educational goals. The ideal context for learning connects education with real life, real work, and real citizenship.

Data overload results from copious amounts of information generated by modern media, and many people are not emotionally equipped to assimilate or interpret this data. Learning occurs when an individual constructs and solves real life problems. Classical education ignores the fact that each individual brings a unique set of real life experiences.

When learning is detached from meaningful context, it is reduced to memorizing isolated facts. Teaching in a coordinated way from concrete to abstract, with practical application, will provide evidence orientation. A balance of liberal and practical arts is essential. Excellence must be described in terms of connectedness and applicability.

Hull, D., & Parnell, D. (1991). The tech prep associate degree: A win/win experience. Waco, TX: Center for Occupational Research and Development.

One Approach Does Not Fit All

Education has historically selected winners, but is now faced with the dilemma of making winners out of ordinary people. Is an educational crisis for the year 2000 being created by defining excellence as one kind of educational program for all?

Could one curriculum for all be termed educational malpractice? While diversity of populations and differences learning styles must be considered, we have instead relied on the use of SAT and ACT results to "measure" the quality of education. Designers of those tests have cautioned against their use as the basis of such value judgments.

Plato's classical view of education has been favored over the practical notions of Aristotle. "Applied academics" does not tend to fit in that view.

Goldhammer notes, "That which is needed in today's world is neither a new brand of academicism nor a new style of vocationalism, but a fusion of the two."

We are no longer in a liberal arts versus practical arts situation, since both are essential. There is a need to match goals of schooling with real life needs of individuals. All young people require first rate educational programs that prepare them for their next step, regardless of what that step is.

The U.S. has come the closest of any nation to providing excellent universal education, but many individuals are still made to feel like failures. Lack of agreement on what excellence is or how to integrate it into education creates a problem. In 1983, *A Nation at Risk* concluded that more and more young people were emerging from high school ready for neither college nor work. There is a certainty that the current situation in schools and in markets indicates we need something.

Hull, D., & Parnell, D. (1991). The tech prep associate degree: A win/win experience. Waco, TX: Center for Occupational Research and Development.

Preparing Students for the Real World

A Woodland, California, high school has so effectively integrated education that 93% of the 1600 students take vocational courses. The practical application of applied academics helps create a complementary program named Career Opportunity Paths in Education (COPE), instituted in the mid 1980s to address the key elements of practical application and relevancy of education.

Occupational interests are identified with the aid of counselors during junior high. A four year individualized curriculum is developed to guide selection of vocational and academic courses, work study opportunities, and extracurricular activities through high school. The basic emphasis of the design is school as preparation for work. Results include a 40% increase in vocational courses, better results in all test scores, and a 38% decrease in drop out rates, with two thirds of all students now pursuing postsecondary education.

While extensive career exploration and comprehensive guidance are hallmarks of the curriculum, the real heart is six instructional clusters called career paths. They are:

- Agriculture and Natural Resources
- Arts and Communications
- Business and Marketing
- Health, Home, and Recreation
- Industrial Technology and Engineering
- Social, Human, and Governmental Services.

A combination of core credits and elective courses which cut across career paths make up the students' plans. All types of students have the opportunity to contact each other in a "real world" type atmosphere. Students are at the center of the design.

Wilcox, J. (1991, September). Preparing students for the real world. Vocational Education Journal, 38-40.

Research Cites Six Mistakes of Education and Training

Current research is beginning to show that the education system is operating on many false assumptions about the learning process. Sue Berryman, director of the Institute of Education and the Economy at Teachers' College, Columbia University, suggests a new vocabulary is necessary to integrate research results into educational practice.

1. Skills are not like building blocks; basics do not need to be taught before solving problems.

2. Students are not blank slates; most return to prior conceptions when faced with unusual problems.

3. Students are not passive receptacles; learning is best when it is active, involved, and constructive.

4. Theory must be taught in the context of what it means in practice, not in isolation.

5. Separating learning to know and learning to do is dysfunctional; the two approaches are inseparable.

6. Teaching must occur in an appropriate setting, not out of context.

Excerpt from Vocational Education Weekly, Monday, May 28, 1990.

Tips for Work Based Learning

The best job prospect is the person who possesses both theoretical knowledge and practical experience. Here are ten suggestions for employers and educators to consider when including work based learning in a tech prep program.

1. Students learn from mutually supportive activities in the classroom and workplace. Educators and employers must agree that the purpose of work based learning in a tech prep program is to reinforce theoretical classroom curriculum with practical experience on the job.

2. Develop a consensus on workplace learning objectives. There should be a representative committee for each career cluster of employers and educators that can discuss, identify, specify, and measure student learning objectives in the classroom and the workplace.

3. Design an apprenticeship curriculum that is complementary to the classroom curriculum. Once the cluster committees of employers and educators have agreed on the objectives each student must accomplish, the employers must devise a process by which their apprentices can reinforce the classroom objectives on the job.

4. Depending on the career field and the number of objectives or competencies a student must master, the student should begin work based learning as soon as possible. Work based learning must not be allowed to take too much time away from the classroom, for that is still where students need to receive most of their learning experience. However, enough time should be set aside to make the job profitable for the employer and meaningful for the student.

In the early stages of work based learning (10th grade), a student should not work more than eight hours per week. In the 11th and 12th grades, the student could work up to, but not more than, 15 hours per week. Full time summer work based learning should include objectives that cannot be accomplished during the regular school year.

5. There should be a formal contract between the student and the employer who provides the work based learning environment. The contract reinforces the employer's investment in the program and states the learning objectives that the employer has agreed to help the student achieve.

6. Appropriate credit must be awarded for demonstrated competencies obtained through work based experiences. Employers and educators must agree on how, and to what level, these competencies should be tested.

7. Student expectations of an apprenticeship program or any type of work based learning should be keyed to career preparation, not the amount of money to be made. If the goal of the work based learning is not clear, the student is not likely to achieve meaningful competencies from the program.

8. Employer expectations should focus on the eventual contribution to the workforce of better prepared workers, not on student workers as a cheap source of labor. Employers must create important learning experiences for students, if they expect the end result to be good entry level employees of the future.

9. Educator expectations should be based on the premise that certain learning is best delivered through practical work experience.

10. Apprenticeships do not necessarily lead to eventual employment at the workplace learning site, although they may. It is important that the employers and students understand from the beginning that once the apprenticeship is over and the contract completed, the employer is not obligated to hire the student, and the student is free to accept employment elsewhere or to continue his or her education beyond the tech prep program. ...Hull, D., & Marsalis, C. (1991, March). Work based learning: Tech prep educators and employers ease the move from school to work. Vocational Education Journal

Using Applied Academics to Improve General and Vocational Education

Concepts are taught more effectively when "learning to know" (academic) and "learning to do" (vocational) are linked. Vocational education can provide the natural setting in which to create new connections between academic concepts and the application of those concepts. Fundamental changes in the ways schools operate will be required to accomplish this. Successful efforts involve intensive staff and curriculum development.

National and regional studies indicate that well designed vocational courses can raise academic levels of achievement significantly. The impact is greatest when higher level competencies such as problem solving, comprehension, science, and mathematics are incorporated.

The consortium's recommendations for achieving an improved general and vocational education curriculum include:

1. Redefining vocational education to address the dual role of employability and establish a foundation for successful continued learning.
2. Upgrade academic content of vocational courses by investing in curriculum development and instructional materials.
3. Provide applied academics in a sequence of innovative, integrated courses in math, science and reading.
4. Develop new sequences of vocational study designed to prepare students to select from a variety of related employment opportunities and provide the skills and knowledge necessary to continue to learn and work.
5. Upgrade graduation requirements.
6. Do more to help underachievers succeed by believing they can do so and assisting them.
7. Link secondary and post-secondary education and training through formal articulation agreements.
8. Provide assistance in course selection and planning by providing educational, career and attitude assessment information from grade 8.
9. Provide staff development to assist in upgrading academic knowledge and ability to use teaching methods; devise learning experiences that will help connect science, math and communication skills with jobs; and rethink strategies for raising rigor and status of combined vocational/academic programs.
10. Establish performance indicators in four major areas—academic achievement, vocational attainment and technical achievement, employment outcomes, and postsecondary continuation and achievement.

Bottoms and Presson

The revision of the curriculum includes a new focus on counseling regarding beneficial courses, including sequenced math and science courses and an in depth study of an academic or vocational program as preparation for employment or postsecondary education. Efforts to teach abstract concepts through an applied and functional approach have proven effective when extra assistance and encouragement are provided and the teacher has an expectation that the student will succeed.

Such an approach involves a shift from offering a fragmented collection of unconnected courses to developing a structured, coherent, and challenging program of study that combines academic and vocational elements and is designed with a double purpose—preparation of students for both employment and further education after high school.

More effective working relationships with the business and industrial community will allow parents, students, and teachers to understand what competencies are essential for employment and advancement.

An integrated program can provide a structured and purposeful high school experience; raise academic and technical achievement expectations; motivate students by helping them see the connection between academic and technical education; and create a team of teachers to provide support, encouragement, and help.

Academic and vocational teachers become equal

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shareholders as they recognize the complementary nature of their work and the need for each others' expertise to understand and present material. Planning time for alignment of the programs is essential.

Realistic objectives include raising the quality of all courses, improving the relationship between the academic and vocational educators, and upgrading high school requirements, especially in science and math. Information on what is required for success after high school will help identify reasonable steps.

The 2+2 concept, a Tech Prep Associate Degree, offers one solution by providing a link between secondary schools and two year postsecondary institutions. Fifteen southern states formed a consortium in 1987 to develop a set of strategies for restructuring general and vocational curricula to raise the math, science, and communication competencies of students in grades 9-12 not enrolled in college prep courses.

Excerpted and adapted from Gene Bottoms and Alice Presson, Improving General and Vocational Education in the High Schools. (Report prepared for SREB Consortium, 1989).

The Walls Come Down

The traditional way to address low job placement of vocational students has been to upgrade equipment and tailor programs to meet employer needs. Given the fact that the average American worker will change occupations four to six times in his or her work life, such concentration on specific job skills is obsolete. Concentration on academic and problem solving skills for the future workplace is more appropriate.

The 1990 Perkins Act is an important step in redirecting vocational education and, eventually, education in general. The legislation creates unique possibilities for new levels of collaboration, including: 1) requiring that vocational and academic education be integrated, 2) movement from occupationally narrow, skill-based training to instruction in all aspects of an industry (transferrable skills), and 3) greater links with community development efforts.

With vocational programs sometimes viewed as "dumping grounds", such integration will require adopting a new view—that vocational education is a different way to learn the basic academic concepts and skills. All teachers will have to cooperate and devise new ways of teaching and learning using multiple intelligences (artistic, kinesthetic, and social, as well as linguistic and logical).

Development of integrated studies programs which address development of technologies from basic to abstract can reduce the need for the latest equipment. Reality is the polarization of the workplace, with a few high wage, high skill jobs at the top and large numbers of low skill, low pay jobs at the bottom. It creates the challenge to

prepare students for involvement in job creation and the development of local enterprises. School based enterprises are one means of enhancing the relationship between education and community development.

The primary goal is an opportunity for all students to draw on their strengths and realize their potential through restructured education.

Rosenstock, L. (February, 1991). The walls come down: The overdue reunification of vocational and academic education. Phi Delta Kappan, 434-436.

Work Based Learning

A combination of good academic background and practical experience is important. Lack of experience can be a major obstacle to obtaining a job. A blending of practical (hands on) and theoretical (education based) training in occupational programs is key for the future.

The West German apprenticeship program is an example of effective integration of education and experience into a program. This "dual system" of vocational education provides the opportunity for students to combine academic instruction with work based learning. A contract allows students from age 16 to combine several days of vocational school with work time each week. Fifty seven percent of West German students participate in such programs.

While a duplication of the program would not be feasible in the U.S., integration of the idea of workplace learning is reasonable. Arrangements between employers and students for apprenticeships, cooperative programs, or workstudy situations can address the need for a combination of theoretical and practical knowledge. Considerations for incorporation of work based learning include:

1. Agreement on the purpose of the program with ongoing communication regarding mutually supportive activities in the classroom and workplace.

2. Consensus on learning objectives after identification of job market needs and predictions by employers and educators.

3. A reasonable and progressive schedule for work based learning based on student maturity, career field, and an established balance between academics and practical experience.

4. Signed agreements to outline who provides the work based learning environment, including employer expectations and program objectives.

5. Award of appropriate credit by school and employer for demonstrated competencies obtained through work based experiences.

6. Appropriate focus of expectations based on career preparation, interest, ability, and ways practical work experience can reinforce basic skills.

7. Emphasis on the fact that work based learning arrangements do not necessarily lead to eventual employment at that site. When experience is complete and conditions of the agreement fulfilled, both parties are free of obligation.

Hull, D., & Parnell, D. (1991). The tech prep associate degree: A win/win experience. Waco, TX: Center for Occupational Research and Development.

Who Gets What Curriculum and Why?

A case study of three high schools was conducted by the National Center for Research in Vocational Education and the Rand Corporation as the first phase of a two-year study of comprehensive high schools' vocational course offerings and how they decide which students should be enrolled in them. The schools are similar in size and grade span and in the same labor market area; they belong to different school districts and serve different student populations. One school serves a racially and socioeconomically diverse group in a naturally integrated neighborhood; the second school serves a mostly middle to upper middle class white and Asian population; and the third school serves a student population nearly all Black or Hispanic, with a substantial proportion poor. Other differences in the schools included differences in the type and range of vocational programs, number of and expectations for the students who take the courses, organization and management style of the schools, morale of faculty and staff, and local traditions or history. **At all three schools, the guidance and placement systems seemed to concentrate on college bound and severely troubled students, almost ignoring noncollege bound, untroubled students.** Although each of the schools offers a variety of vocational courses, none has a cohesive, comprehensive vocational program. At all three schools, the perception of vocational education was of poor teachers, poor equipment, poor students, and poor courses. The study concluded that a radical approach to high school reform that would involve a more fundamental reconstruction of the high school curriculum, blurring the distinction between academic and vocational subjects, should be investigated.

From ERIC Document ED 317 769.

More Promising Signs for Work Based Learning

Fredrick Welch suggests in his article "Who Will be the Students in Vocational Education?" that enrollment in vocational education will increase as students try to understand complex technologies.

There are some very hopeful signs for vocational education, and vocational industrial education in particular, for the future. Former Secretary of Education Lauro Cavazos (1990) indicated three promising strategies for strengthening vocational technical education: (1) a close link with business, (2) applied experience based on learning such as the principles of technology, and (3) the tech prep curriculum.

In the future, vocational industrial education courses will be used to help academic and vocational students understand complex theories and conceptualize the new technologies. Vocational guidance counselors will no longer say, "Do you want to take the college preparatory course and go on to college, or take the vocational course and go to work?" Instead, the counselor will be saying to all students, "How do you want to go on to further education—through vocational education or through academic preparation?"

Most students will find that vocational preparation programs will help them understand complex technologies. This trend will help increase high school vocational enrollments.

For the most part, our secondary vocational students are somewhat turned off by academic education, and because of the delivery systems of vocational education, have found reasonable success in the occupational shop fields. This may be due, in part, to learning/teaching style differences and/or the time that students spend in a shop area with students of like interests. Such

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circumstances foster a loyalty and devotion to the vocational teacher as well as the vocational specialty area. There seems to be little articulation between the academic and vocational segments of education. Students have a strong interest in learning a trade to earn a living. They have little interest in taking courses for grades.

Welch, F. (1991, April). Who will be the students in vocational education? School Shop.

Integrated Learning for a Competitive Work Force

The U.S. must capitalize on its human resources to maintain a competitive edge in the global economy through the '90s and beyond. Increasingly rigorous competencies and skills are necessary for current jobs. The challenge is to prepare a shrinking work force to prepare for such jobs. Higher capabilities in reading and mathematics, flexibility and adaptability, and good communication skills are essential.

Congress has attempted to deal with these issues through amendments to the Carl D. Perkins Vocational and Applied Technology Education Act in an attempt to integrate academic and vocational education. Attraction of students of all abilities to vocational education will maximize potential human resources. **Vocational education becomes an educational delivery system, not a content area, which encourages students to learn how to learn.**

Minimum skills are not sufficient preparation for career advancement. Higher level skills such as problem solving, reasoning, and learning ability are essential. Competencies in math, science, communication, and organizational skills are correlated and integrated with technical occupational skills in successful programs. Integrated academics can provide learning through an abstract and concrete application. Academics and vocational education are complementary, linking academic instruction to vocational application to enhance learning.

The process of finding technical applications for academic skills must be a cooperative venture. With input from businesses and vocational and academic instructors, a curriculum can be developed. Beginning with job analyses, educators can identify math and science concepts and skills that need to be taught for each block of instruction. Strategies, methods, and materials are implemented cooperatively, then weekly follow up occurs. The continuity of such a program helps students progress at a more rapid pace and take more responsibility for their own education.

Planning for a comprehensive, integrated curriculum is a change process that takes time. Needs and concerns of all who play roles must be addressed at each stage of the process if the implementation is to be successful.

The benefits of such a curriculum include better organization due to cooperation; more rigorous curriculum due to integration of math and science; application of both abstract and concrete approaches to enhance knowledge; progression of students at their own pace; materials to aid in preparation; access to several experts rather than just one; higher scores on achievement tests; and more highly motivated students with lower rates of absenteeism.

As the economy has shifted from production to service to information, the composition of the work force has been becoming more diverse. Education must change to meet the needs of the work place. Integration of academic and technical knowledge and skills within an applied vocational learning model is one for these challenging times.

Kolde, R. (1991). Integrated learning for a competitive work force. Phi Delta Kappan, 453-455.

Integrating Academics

Years ago, when hiring technicians for the U.S. Air Force, Leno Pedrotti discovered that many applicants had "shied away" from tough math and physics courses during their schooling. Today's vocational students are no different, says Pedrotti, now senior vice president of the Center for Occupational Research and Development (CORD) in Waco, Texas. "These kids have precious hand skills but are bypassing opportunities for getting head skills."

Vocational educators are trying to change that. To ensure that students are trained in *both* head and hand, educators in the field are working to integrate more academic content into the vocational curriculum. The integration movement is "very rapidly growing now throughout the land," says Gerald Hayward, deputy director of the National Center for Research in Vocational Education at the University of California—Berkeley.

Vocational courses are fertile ground for academic learning, experts say. Recent cognitive research shows that learning by doing is "a very powerful educational device," says Hayward. "We all learned how to use a

computer that way," he notes.

"Many people learn from the concrete to the abstract," Charles Buzzell, executive director of the American Vocational Association, says. "Voc ed provides a wonderful environment to experience the concrete."

Concerns over the "skills gap" are fueling the integration trend. As the skills workers need on the job grow more complex, educators and policymakers are becoming increasingly concerned about the less than rigorous academic content of some vocational programs. Many of today's office jobs, for example, require workers to be familiar with complicated technology, such as computers and teleconferencing equipment. In industry, workers often need to know not only how to use machinery, but how to troubleshoot and repair it. Assembly line workers may even need to know robotics. Given these growing demands on workers, vocational students need a thorough grounding in math, science, and communication skills, experts say.

Enough Already?

Despite the calls for change, some experts, like Buzzell, contend that academic skills have always been part and parcel of vocational education. Students can't complete a good program without mastering the basic skills, he insists. "They're just embedded in the fabric."

He cites training for electricians as an example. "The assumption in the minds of a lot of people is that there is no math, no science, and no communication skills taught to electricians." On the contrary, he says, trainees must learn subjects such as geometry and algebra. "I was taught that you could find resistance by dividing volts by amps. That's algebra—you're solving for *x*."

Other experts, however, contend that vocational students too often learn only low level academic skills. They are typically given "minimal and diluted academic content," says Larry Rosenstock, executive director of the Rindge School of Technical Arts in Cambridge, MA.

"The academic content of [vocational] courses needs to be beefed up," Hayward agrees. He quickly adds, however, that it is unrealistic to expect vocational programs to make the change alone. Instead, a stronger connection between academic and vocational courses is needed.

Newly developed curriculums for teaching "applied academics" are helping to provide that connection. **Unlike the traditional textbook approach, in which knowledge is often presented in the abstract,** divorced from everyday life, applied academics courses link theory and practice. Lab work is central, providing hands on experiences that illustrate academic principles.

"The Center for Occupational Research and Development (CORD) has developed several applied academics curriculums for high school students," says Pedrotti. These include "Principles of Technology," a two year course in applied physics; a two year course in applied mathematics; and a new one year course in applied biology and chemistry.

The CORD curriculum's aim is to help students overcome their reluctance to confront academic concepts. "Because vocational students typically have 'a love of devices' and the ability to use their hands," Pedrotti says, "the curriculums allow them to work often with equipment—their 'trump suit.'" But they also introduce students to scientific principles, which are demonstrated in concrete ways. "In the lab, students begin to tolerate the abstractness of equations."

"Principles of Technology, the applied physics curriculum, uses lab experiences not as ends in themselves but as a context for discussing the principles of physics," Pedrotti explains. "In a traditional automotive shop, for example, a unit on brakes would cover such topics as how to raise the automobile safely, remove the wheel, and so on. In Principles of Technology, the instructor also talks about the scientific concepts involved, such as hydraulic pressure, friction, and thermal energy.

When Principles of Technology was introduced, the developers felt "a lot of trepidation" that the physics content would scare students off. Happily, students have not been intimidated. "Today the curriculum is being used by 40,000 students in 49 states," Pedrotti says. "But students still don't like to read the printed materials," he notes with chagrin.

"Principles of Technology has been a success at Pendleton High School in Pendleton, S.C.," says Harriet Palmer, who teaches the course there.

Palmer's class attracts a mixture of students, vocational and college bound, and she believes it serves them all equally well. In their lab work, students use equipment such as voltmeters, motors, winches, thermal couples, and an oscilloscope. "The course gives students some freedom," Palmer says, "allowing them to do problem solving." As a result, they gain confidence in their abilities. "They're enthused about it," she says.

"In fact, enthusiasm runs so high that one student came in after school every day for a week to replicate a demonstration. And students are spreading the word that Principles of Technology is 'a fun class,'" Palmer reports.

A Two Way Street?

While most experts agree that the movement to include more demanding academic content in vocational courses is gaining momentum, the degree to which this trend will influence *academic* courses remains unclear. **Academic instruction also needs to be reshaped, some experts contend, to allow students to learn by doing as well as by reading or listening.**

Rosenstock, for example, believes that vocational education should "recognize its strengths and share them with the academic sphere. **A number of methodologies common in vocational education**—hands-on learning, performance assessment, cooperative learning, team teaching—'**need to be brought into the rest of the educational arena**,'" he says.

"**We ought to teach the standard curriculum with more of an applications slant**," agrees Ken Gray, the professor in charge of vocational and technical education at Pennsylvania State University. Too often, "**math and science curriculums are barren of application.**"

Gray considers it a "disgrace" that academic students typically have no access to the sophisticated equipment in vocational schools. "Those classes are going empty, and students who really should understand these things are looking at books in an academic school," he charges. "Logistical and funding problems pose a barrier," he concedes. "Finding a way for academic students to attend vocational schools part time is a major difficulty."

One school that has solved that problem is the Bethlehem Area Vocational Technical School in Bethlehem, Pa. "Since the school first opened its doors to students from public and private schools in its area three years ago, the program for academic students has 'mushroomed,'" says Don Foellner, the school's director.

Last year, several honors physics students took applied engineering at Bethlehem, and several honors biology students took health related technology. These college bound students were attracted to the vocational courses because "**so many kids have no applications base to go along with the theory they're getting,**" Foellner says. "The influx of academic students has benefitted the school," he adds, "by raising expectations and providing a mix of students. Now, coats and ties mingle with blue jeans and tee shirts.

"Starting this year, Bethlehem will open all 30 of its programs to students from neighboring public and private schools. Because outside students will be able to attend Bethlehem for two period blocks of time—less than the traditional halfday program—they will still be able to take full advantage of the offerings at their regular schools, such as foreign language classes," Foellner explains.

"Two years ago, enrollment at Bethlehem had 'bottomed out,'" Foellner recalls. This year, enrollment is up almost 100 students, primarily because of the new program for academic students. The school is recognized as a model for integrating academic and vocational studies. Lehigh University has shown interest in holding a summer practicum for mechanical engineering students at Bethlehem. "We're ecstatic about what's happening right now," Foellner says. "It's exciting times for us."

Working Together

Collaboration between teachers from the academic and vocational realms is critical to integration efforts, experts say.

Academic and vocational teachers at Tyrone High School in Tyrone, Pa., used to keep to their own; the division between them was symbolized by the heavy doors between the two parts of the school. "Now, teachers from both sides are often found in each other's classrooms," says Janette Kelly, the school's vocational director.

The collaboration has borne fruit. Vocational teachers and math teachers, for example, have worked together to develop ways to introduce applied technology into math classes. "We don't have 'shop math' any more," Kelly notes. In addition, an industrial technology teacher and a science teacher are coteaching a course for 8th graders, which is hands on but deals with "very high level science."

"The academic teachers are thrilled" to be sharing instructional ideas with their vocational colleagues, Kelly says, "and all teachers are excited to be blending the academic and vocational." But, "It's not easy to do," she cautions. "We've had this idea that if you're vocational, you're not intellectually inclined—you work with your hands." Changing that attitude is worth the effort, however, she asserts.

"The Great Oaks Joint Vocational School District in Cincinnati, Ohio, has also succeeded in fostering collaboration between academic and vocational teachers," says Rosemary Kolde, associate superintendent.

"Collaboration in the district started in earnest several years ago," Kolde says, when vocational and academic teachers met over the summer to write a new academic curriculum—one that meshed with the vocational curriculum and used problems and examples drawn from

the workplace. Now, academic teachers get an extra planning period so they can team teach with a lab teacher. Concepts that students learn in a trigonometry class, for example, are also used in a lab class to reinforce them. Students are extremely successful in the new program, Kolde says, because they find learning more relevant. **"A lot of students are really turned off by a straight academic class,"** she observes.

While many vocational experts are enthusiastic about integrating academic and vocational content, they also cite numerous prerequisites. "The key thing is to get the teachers to sit down together and have some time to plan," says Hayward of the National Center for Research in Vocational Education.

"Teachers need staff development to help them coordinate and articulate what they teach; otherwise, the result may be a 'one sided, superficial version' of integration," says Jay Cummings, Director of Vocational and Applied Technology Education for the state of Texas. "A math teacher might mention that math helps tool and die makers," he says. "Some people call that integration."

"Staff development may also be needed to provide teachers with new skills. Some vocational teachers with backgrounds in industry are fearful of teaching academics," says Harley Schlichting, director of the Instructional Materials Lab at the University of Missouri and a former high school voc ed teacher. Similarly, academic teachers "need help with the applications side," says Gene Bottoms, director of the Southern Regional Education Board's State Vocational Education Consortium.

"If folks believe that because we now have the legislation, [integration] will automatically happen, that is a major mistake," Bottoms says. "Integration will happen only if principals and teachers have a vision of what the high school could be as a result," he says.

Ellis, S. (1991, September). ASCD Curriculum Update. Alexandria, VA. pp. 2, 4-5.

Connecting School and Employment

The goal of the Council of Chief State School Officers' priority, "Connecting School and Employment", is to improve education and experiences that bridge youth and adulthood and prepare youth for immediate or eventual entry into the world of employment.

Where they exist, specialized vocational high schools affiliated with particular industries have been very successful in preparing students with different abilities but similar interests for occupation (extending well beyond entry level skills) and college entry. Their performance has been superior to regular high schools on indicators such as rates of graduation, percentage of students taking the SAT, average combined SAT scores, and percentage of minority students scoring above their racial group mean. Their industrial affiliations have provided opportunities for cooperative education experiences for students in a range of industrial settings and aspects of industry previously unaccessible. These affiliations have also deeply immersed the industries in the instruction and motivation of students. Yet these examples of high quality programs are the exception and not the rule.

For many youth, access to program models which provide supervised orientation to the work place and effectively combine classroom and work based education is also limited. Few high school juniors and seniors participate in cooperative education—a program which systematically combines classroom instruction with paid work experience and on the job training relating to a student's career interest. Apprenticeship, a form of paid work based learning and credentialing with a long tradition in this country, is available to a relatively small number of workers (only 263,000 in 1989) in a limited number of trades, and is seldom accessible to entry level workers or school age youth—the average age of apprentices is 29.

We must seek out new partnerships which provide an expanded learning environment for our youth and which provide quality school based and work based experiences which are reinforcing and motivating.

For all students, schools must make clear the connection between learning in school and future success in the labor market and must provide opportunities for career and employment orientation and awareness beginning in the earliest years.

Council of Chief State School Officers. (1991). Connecting school and employment. Washington, DC: Author.

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A Proposal for Making Transition From Schooling to Employment an Important Component of Educational Reform[1]

Kenneth B. Hoyt

Introduction

In recent months, a major indictment of American living has surfaced with some regularity. It states:

> In no other industrialized country are the transitions from school to work...left so much to chance as in the United States.

This indictment contains too much truth to be ignored. Here, efforts are made to: (a) put the problem in preliminary perspective with reference to current K-12 educational reform initiatives in the education/work relationship domain; (b) discuss some of the major factors contributing to American's relative lack of success in solving the youth school to work transition problem; and (c) suggest some possible solutions holding potential for making "transition from schooling to employment" an important component of educational reform in America.

Educational Reform and "Transition" Problem: An Initial Perspective

While most of the early educational reform proposals of the 1980s made reference to the need for America to become more competitive in the international marketplace, not one included "transition from schooling to employment" as a major component of their reform proposals.[1] Most concentrated their proposals on efforts to improve academic achievement in communication, mathematics, and science.[2] We were warned that those youth who fail to acquire such skills will have great difficulty finding employment. On the other hand, exactly how possession of such skills will **help** youth secure employment was never specified.

More recently, educational reform proposals have broadened their efforts to specify the kinds of skills employers need high school graduates seeking employment to possess.[3] While some variation in the names of recommended skills exists in these reports, they seem to center around three areas, including: (1) academic skills; (2) reasoning/problem solving skills; and (3) positive attitudes toward work and working coupled with productive work habits. The most comprehensive description of such skills can be found in a new book written by Carnevale, Gainers, and Meltzer.[4] Still, even though the specific kinds of skills employers are urging K-12 school systems to provide youth in the name of educational reform have been defined in a more precise manner, the topic of how youth are to actually use such skills in securing employment has not been a part of the reform discussion.

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[1]Hoyt, K. (1990). A proposal for making transition from schooling to employment an important component of educational reform. Future Choices: Toward a National Youth Policy, 2(2), 73-86.

A Proposal for Transition, continued

Three currently popular national proposals for relaying the transition from schooling to employment now exist, only one of which is perceived by some of its proponents as directly tied to educational reform. The first is the "Jobs For America's Graduates" program--a program that appears to be very similar to an earlier program called "70001" that is also still in operation.[5] JAG is a concentrated effort to work especially with disadvantaged high school seniors in providing them with job seeking/finding/getting/holding skills and to actually assist them in securing employment. JAG does not seek to tie its operations to a broader, more comprehensive program of educational reform in the high schools where it operates. A second is a proposal from the National Alliance of Business for the creation of what NAB calls "Model Jobs Collaborative Programs" aimed at guaranteeing jobs for participating secondary school youth when they graduate from high school.[6] This is, in effect, an extension of the Boston Compact program.[7] It does not pretend to be an educational reform proposal **per se**.

The third proposal—and one currently growing rapidly in popularity—is "work based learning" as proposed by the U.S. Department of Labor.[8] This program, now officially housed in DOL's Office of Work Based Learning, claims that its "apprenticeship style" approach is the best way for youth to **both** (1) acquire employability skills, and (2) make a successful transition from schooling to employment. Much of the rationale for making such claims is documented in two recent reports describing highly successful programs of transition from schooling to employment in other developed countries.

One report describes programs in Sweden, West Germany, Great Britain, France, and Philadelphia, Pennsylvania.[9] The second report describes programs in England, West Germany, Sweden, and Japan.[10] In both documents, the importance of tying classroom learning directly to occupations via concentrated period of work experience is emphasized. Great and growing interest is being expressed in devising and implementing some kind of "apprenticeship—American style" effort drawing from the successful experiences of these other industrialized nations. Whether this is another educational reform proposal—or a proposal to create a completely new kind of educational system—is unclear. What is clear is that, at this point in time, only very limited attempts have been made to tie this form of THAT suggested reform to the broader set of proposals for educational reform developed during the 1980s. Both the practicality and the problems of inserting an "apprenticeship style" work based learning effort into the educational reform movement will be discussed later. We now turn to a discussion of some major reasons why the "transition" problem in the U.S. is currently greater than in other industrialized nations.

Special Schooling to Employment Transition Problems Facing the U.S.

Problem #1: Higher Education: A Closer Look at International Comparisons

Unfortunately, neither the Nothdurft nor the Government Accounting Office documents referred to above include specific data regarding the percentage of youth who pursue a four year college/university degree program. The estimates that could be found were from a 1987 reference.[11] The data indicate that the percentage of high school graduates who go on to college are:

Sweden: 32% males; 43% females (p. 38)
West Germany: 21.5% (p. 26)
France: 28% (p. 24)
Great Britain: 13% (p. 17).

A U.S. Department of Education publication entitled *Japanese Education Today* (1987)

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indicated that 18 percent of Japanese high school graduates go on to four year university degree programs.[12]

The U.S. Department of Labor reports that 38.9 percent of U.S. 1989 high school graduates were enrolled in four year colleges and 21.1 percent in 1-2 year colleges in the fall of 1989.[13] When compared with major international competitors, it appears that American high school graduates are at least twice as likely to enroll in four year college/university programs as are youth in these other nations. An even more startling contrast can be seen by noting that, even by the year 2000, only 23.4 percent of U.S. jobs are predicted to require a four year college/university degree.[14] When almost 40 percent of high school graduates are planning to prepare themselves for jobs that will be available to only 23.4 percent of **all** employed workers, problems in the "schooling to employment transition" area are sure to be commonplace.

Kutscher has predicted that the surplus of college graduates in the U.S. that began in the early 1970s is expected to continue through the year 2000.[15] It seems apparent that the discrepancy between the percent of high school graduates entering college and the percent of jobs requiring a college education is much lower in other industrialized nations than it is in the United States.

Many who enroll in higher education leave prior to earning a baccalaureate degree. Thus, in the U.S.—as contrasted with other developed nations—the problems of transition from schooling to employment include very large numbers of college noncompleters as well as high school graduates seeking immediate employment. The noncollege bound graduating high school seniors represent only a portion of the population to be considered.

One of the obviously significant factors is that, in all of these countries **except the U.S.**, youth desiring to enroll in four year college/university programs must pass a college entrance examination. A vast majority of high school youth in these countries (i.e., those who fail to take and/or to pass the college entrance exam) are well aware of their need to find alternative means of preparing for success in the world of paid employment. In the U.S., by contrast, the "American Dream," for most families, is that their children become college graduates. Readily available statistics make it clear that straight line relationships exist between number of years of education and both (a) job earnings and (b) unemployment rates. For examples, consider the following figures:

From *Education Week* (March 29, 1989) "Schooling and Earning":

Head of Household	**Median Household Income, 1987**
1-3 years high school	$21,165
4 years high school	$29,937
1-3 years college	$36,392
4 years college	$46,533
5 years or more college	$54,492[16]

From *The Forgotten Half* Final Report (1988), page 126:

Educational Unemployment Level Rates

Completed	**Male**	**Female**
1-3 years high school	11.2%	10.9%
4 years high school	6.7%	5.8%
1-3 years college	5.0%	4.0%
4 years college	2.5%	2.1%[17]

Faced with figures such as these, it is not surprising to find parents desirous of having **their** children prepare for and enter into college. Any alternative program aimed primarily at preparing students for immediate employment after high school is almost certain

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to be viewed as something for "**other** parents' children." The "right to try"—including the "right to fail"—is an essential part of the concept of "freedom of choice" in the United States. The creation of a national college admissions examination that all persons desiring to enter college/university settings must pass would be strongly resisted by most Americans. Many cases now exist of the "1 in 100" kind of person who battles the odds and successfully completes college.

As a result, the U.S. has, in effect, elected to build in a degree of purposeful inefficiency in its "transition from schooling to employment" system as the price to be paid for protecting individual freedom of choice. Until and unless this freedom is relinquished, it seems inevitable that the U.S. will, to some degree, continue to lag behind other industrialized nations in solving the "transition" problem.

Problem #2: The "Secondary Labor Market" in The United States

Hamilton bases his call for an "apprenticeship" approach to solving America's "transition from school to employment" problem in part on the existence of the "secondary labor market" that most youth leaving the secondary school for employment are expected to enter.[18] According to Hamilton,

> ...(Employers)...in order to curtail the costs of training new employees who soon quit for another job...have simply rejected teenage applicants, waiting until they have a few more years work experience before offering them career entry positions and investing in their training...(now,) because of the 'baby bust', they can no longer ignore teenagers, simply allowing them to season in the secondary labor market (p. 28).

Hamilton defines the "secondary labor market" as

> jobs that pay little more than the minimum wage, offer no fringe benefits, demand few skills, are insecure, and lack advancement opportunities (p.22).

and notes that many youth remain in such jobs until about age 25 when employers believe they are "seasoned" enough so as to justify investing some dollars in training them for various jobs. This view is reinforced by the recent DOL publication *Work Based Learning* by the following statements:

> Many young people who do not go on to a 4 year college find low paying, low skilled employment with little opportunity for advancement...Few high school graduates...are considered by the employer community to be ready for work (p. 39).[19]

Part of the rationale behind suggesting the existence of a "secondary labor market" is found in the consistency of figures indicating youth unemployment rates to be consistently about three times as high as those of adults. Recent figures from THAT's Bureau of Labor Statistics illustrate this with the following statistics:

Age Category	Unemployment Rate
18-19 years old	13.4%
20-24 years old	8.2%
25 years and over	4.1%[20]

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Excellent examples of youth experiences in such jobs are found in a new publication of the Education Writers Association.[21] Youth jobs described in this publication fit Hamilton's description of the "secondary labor market" very well. Most of the youth described in this publication can be said to be persons who would like to "work" but are forced to settle for a "job".

It appears that, in other industrialized nations, conscious efforts are made to avoid placing noncollege bound youth in the "secondary labor market". Instead, employers have joined forces with educators to provide youth with work experience which, when coupled with their formal schooling and employer training opportunities, enable most youth to secure career entry jobs leading to career ladder opportunities in the primary labor market.

If placement of noncollege bound youth in the "secondary labor market" has been largely the creation of employers, the question of willingness of employers to admit youth to entry level positions in the "primary labor market" (i.e., jobs that provide some opportunity for advancement and for employer training) must be surfaced. This, in turn, raises the question of willingness of employers to accept part of the responsibility for helping youth make successful transitions from schooling to employment through "partnership" arrangements with the educational system. Are **both** employers **and** the K-12 school system prepared to change from being part of the "problem" to becoming part of the "solution"?

Until and unless this question is answered affirmatively, it seems unlikely that attempts to help noncollege bound K-12 youth (a) see the importance of basic academic skills in occupational success, (b) acquire problem solving skills, and (c) acquire positive work attitudes will be very successful. Even if youth were to learn such skills in the K-12 system, many can expect to discover that the jobs they find in the "secondary labor market" are places where such skills are **lost** rather than **gained** (i.e., these skills simply aren't pertinent to success in such jobs.) The continuing presence of a "secondary labor market" in the U.S. seems inevitable. The challenge will be to avoid making it the "primary labor market" for youth seeking employment immediately after leaving high school.

Problem #3: Diversity of Opportunities for Occupational Preparation

An abundance of literature exists containing the evidence that the American system of secondary vocational education has been only marginally successful in helping its students make the transition from schooling to employment.[22,23,24] If rough comparisons were made of U.S. secondary school vocational education graduates compared with noncollege bound high school graduates of other industrialized nations, the U.S. system would appear to be generally inferior. However, in view of the fact that, in most other industrialized nations, the period of occupational preparation extends beyond the traditional secondary school graduation schedule, it would appear to be unfair to make such direct comparison. For example, Nothdurft reports that:

> In Sweden—Upon completion of compulsory school at age 16, students choose among 27 different courses in the "upper secondary system" ranging in length from two to four years.
>
> In Germany—Most young people complete their compulsory education at age 15 to 16 at the end of 9th

> grade and pursue an apprenticeship in a specific trade.
>
> In England—Compulsory education ends at age 16. This is now supplemented by the Technical and Vocational Education Initiative—a four year program designed for youth 14-18 years old aimed at preparing youth entry into the occupational society.[25]

In each of these nations, some kind of "buffer" educational experience aimed directly at helping noncollege bound youth make a successful transition between the compulsory secondary school and employment is in place. Most K-12 education systems in the United States currently appear to leave it up to those youth seeking employment immediately after high school to "sink or swim" on their own--and it is clear that very large numbers "sink"!

Both the George[26] and the Nothdurft[27] reports describe comprehensive career guidance systems now operating in several other industrialized nations aimed at helping noncollege bound youth make a successful transition from schooling to employment. Yet, in the United States, the job placement function takes less of school counselors' time than any other major job duty.[28] The relative lack of attention to meeting the career guidance needs of these youth appears to be due to a combination of (1) the lack of a wide diversity of career opportunities available to them, and (2) the many noncareer guidance duties typically assigned school counselors in the United States. In view of the fact that the career guidance movement originated in the United States—and that freedom of choice is a bedrock American value—it seems surprising to find that the career guidance function for non-college bound youth appears to be a much high priority for other industrialized nations than it is in the United States. There is clearly a need to reverse this situation.

"Apprenticeship—American Style" as a Possible Solution

Many strongly believe that experiential learning calling for some form of work experience is a valuable way for youth to acquire the kinds of skills employers seek. America's K-12 educational systems have, for many years, recognized this both in various kinds of work experience programs and in cooperative education programs. An important cornerstone of the career education movement consists of work experience aimed at providing youth with career awareness/career exploration opportunities. Some K-12 school system/private sector "partnerships" have, as part of educational reform efforts, created exemplary youth work experience programs. Workforce LA is a good example.[29] Many communities now operate "Industry Education Councils" using the system developed by the National Association for Industry Education Cooperation. Various community youth organization (e.g., Junior Achievement, 4-H, Exploring Division, Boy Scouts of America) place major emphasis on using private sector persons as resources for helping youth learn about occupational possibilities in the world of paid employment.

There is nothing new about the concept of calling for private sector/education system efforts in general and work experience opportunities in particular as vehicles for use in helping youth make the transition from schooling to employment. What is relatively new are current calls for use of the concept of "apprenticeship" as a vehicle for solving youth schooling to employment transition problems.

At least three distinctly different "apprenticeship" proposals are currently being actively promoted. The largest is found in

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THAT's Office of Work Based Learning.[30] While calling for retaining formal apprenticeship as industry operated **programs**, strong pleas are made for expanding the apprenticeship **concept** (without calling it "apprenticeship") for use with adults in (a) entry level training in non apprenticeship occupations, (b) upgrading training in all occupations, and (c) as a career path for workers in lower skilled jobs. These new programs would be run by industries. The education system would, for all practical purposes, be ignored.

Work Based Learning recommends that youth at risk of dropping out of school be enrolled in work based learning environments "with clear and direct routes to successful career paths" (p. 42).[31] While not specifying who would operate the "work based learning", USDOL recommends that the theoretical instruction required be provided by alternative high schools and community colleges. This effort would be separate and apart from (rather than a part of) the K-12 education system and thus clearly not associated with educational reform. The only place where the K-12 education system is recommended for use is in strengthening and expanding the current DOL "school to apprenticeship" model now operating in about 400 sites and involving 1,500 students (p. 41).

A second "apprenticeship" proposal can be found in Hamilton's book Apprenticeship for Adulthood: Preparing Youth for the Future.[32] Unlike the USDOL proposal described above, Hamilton perceives what he calls a "comprehensive apprenticeship system" as an important and vital part of K-12 educational reform. He differentiates "school based apprenticeship" (for use primarily in career exploration) from "work based apprenticeships" that are specific and intensive in only one occupation. He envisions the creation of "work based apprenticeships" for youth with clear occupational choices. Beginning in Grade 11, the program operated under the "2 plus 2" concept originally proposed by Parnell.[33] By the end of the program, participating youth would have: (a) a high school diploma, (b) an associate's degree, and (c) a certificate testifying to the possession of high level skills. He acknowledges that this program best fits those preparing to be some kind of *technician*.

To better serve youth lacking the ability and/or inclination to pursue a technical education program requiring postsecondary education. Hamilton proposes three kinds of work based apprenticeship programs including (a) one that "begins in high school and concludes a year or two after graduation", (b) one for high school dropouts that will help them acquire a GED certificate, and (c) one for high school graduates who elect to enter into an apprenticeship following graduation. While he fails to indicate who is to operate and/or pay for these programs, it looks as though he must be assuming this to be some kind of education system/community collaborative effort. Clearly, Hamilton perceives "apprenticeship—American style" as a major new component of the total educational reform movement.

Still another approach to development of a youth apprenticeship system has been proposed by Lerman and Pouncy.[34] Under their proposal, students would, in Grade 10, be offered a choice between pursuing a job apprenticeship or remaining in a purely academic track. Each student choosing the "apprenticeship" route would be required to sign a formal contract with a specific employer. These students would enter a three year apprenticeship beginning in Grade 11 with at least 75 percent of the third year spent in on the job activities. Obviously, high school for such youth would be extended one year beyond its current K-12 format.

If successes of the "apprenticeship" approach in other industrialized nations are

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used as an indicator, all three of these proposals appear to hold promise for alleviating the current situation that finds many recent high school graduates floundering in the "secondary labor market" with no clear means available for securing entry level employment in a firm or organization holding some hope for career advancement. Among the obviously key and important questions that must be asked—and answered—before some kind of "apprenticeship" approach is endorsed as a national "solution" are:

1. As Hamilton points out in his book (p. 160), "apprenticeship" programs best fit those preparing for jobs as "technicians" that require 1-2 years of postsecondary education.[35] Since, even by the year 2000, only 21 percent of occupations are expected to fall into this category[36] how does the "apprenticeship concept" fit those occupations requiring only a high school diploma or even less? Are all "apprenticeships" to be for jobs in the "primary labor market"?
2. How is the optimal time required to provide youth with the specific job skills associated with each "apprenticeship" experience to be determined? How is the great variability in time requirement involved to be taken into account in program operation?
3. What kinds of provisions, if any, are to be made to accommodate college "stopouts" in the proposed "apprenticeship programs"?
4. Who is going to have operational control over the "apprenticeship" operation? The K-12 school system? The community college system? Employers? Labor unions? THAT offices? Some new kind of organization yet to be created by the federal bureaucracy?
5. What assurances can be made that the time each youth spends performing job tasks at an employer's place of business is devoted to equipping the youth with occupational skills—as opposed to serving as a source of free and/or very cheap labor for the employer? To what extent is it contemplated that organized labor will have a voice here?
6. How much pay—if any—is to be provided for those youth who participate in the "apprenticeship" programs? Who is to make these determinations? What nonfinancial incentives can be offered?
7. Will opportunity to participate in some kind of "apprenticeship" be made available to **all** high school graduates? If so, who, eventually, will occupy jobs in the "secondary labor market"? Will employers choose youth—or will youth choose employers—or both? Will "creaming" in any form be allowed?
8. What assurances will participating employers be asked to provide with reference to their willingness to place youth who successfully complete an "apprenticeship" in entry level jobs holding clear potential for advancement and/or further employer training?
9. Is requiring youth to make firm occupational decisions before they are ready and able to make reasoned, mature career choices a price worth paying in exchange for increased assurances they will be able to make successful schooling to employment transitions?
10. Are "apprenticeship" programs to be installed as a component of educational reform? Or are such programs to operate independent of current

> educational reform proposals aimed at better preparing today's youth for successful participation in tomorrow's occupational society?

Of the ten questions raised above, the last three are, by far, the most serious. If an "apprenticeship work=based learning" approach is to become a generally endorsed youth "transition from schooling to employment" policy, **it is absolutely essential that Question 8 be answered in a satisfactory manner**. Assuming this can and will be done, the remainder of the paper will be devoted to an attempt to suggest a series of activities which, if combined with "apprenticeship" approaches, will enable both Question 9 and Question 10 to also be answered in a positive fashion.

Tying "Apprenticeship", "Employability Skills", and "Career Development" to Educational Reform

Career Development and the "Apprenticeship System" Concept

Career development theorists are in strong agreement that most youth are not ready to make reasoned long term occupational decisions before age twenty.[37,38,39] Research in career decision making confirms this element of career development theory.[40,41,42] While, of course, youth at almost any age **can** make occupational decisions, making them is quite a different matter.

There is ample evidence that career development can be speeded up to some extent by proper kinds of interventions. Campbell, in reporting on a metaanalysis of a wide variety of studies aimed at assessing the effectiveness of career development, reported that: (1) 26 of 30 empirical studies reported positive results in the "personal and work skills" (including work values) category; (2) 27 of 34 empirical studies reported positive results in the "career planning" category, and (3) 31 of 44 empirical studies reported positive results in the "career awareness and exploration" category.[43] It seems clear that comprehensive career guidance programs can be effective in helping youth move toward career maturity.

The American School Counselor Association has issued a strong policy statement supporting the role of the school counselor in career guidance.[44] There is now evidence indicating that, while career guidance is still not a high priority for school counselors—and job placement continues to be a low priority—interest of school counselors in career guidance is increasing.[45] There is also good evidence that high school students look to school counselors for help in career development.[46]

While the school counselor is a key person in career guidance, it is important to remember that comprehensive K-12 career guidance programs also include important roles and responsibilities for classroom teachers, parents, and a wide variety of community agencies/organizations.[47] A community team effort is needed.

Need for career development assistance today is certainly not limited to youth. Recent data indicate, for example, that: (1) almost 4 in 10 of currently employed adult workers expect to leave their current jobs sometime in the next three years.[48] and (2) plant closings and corporate downsizing have displaced about two million workers a year since the 1970s.[49] The need for community career development assistance centers serving both youth and adults is clear.

If an "apprenticeship" style "work based learning" approach to solving the "schooling to employment transition" for both youth and adults is to be endorsed, it is absolutely essential that it be accompanied by strong and vigorous efforts to make high quality career guidance assistance available to

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all persons. Without assurance that such efforts will be made, serious questions must be raised regarding the desirability of asking American citizens to give up part of their freedom to make career choices in exchange for assurance of job placement.

Improving Educational Productivity: An Approach to Educational Reform

The wisest path to follow is often hidden from those searching for it because it is too obvious. This may well be true for many of the approaches for reforming American K-12 education put forth by private sector persons during the decade of the 1980s. Two recent documents provide hope that things are improving. One of these publications was produced by THAT's Commission on Workforce Quality and Labor Market Efficiency.[50] It says:

> ...the greater efforts of students (from other industrialized nations) account for much of the shortfall in American students' achievement...there can be no doubt that increased effort by American students would contribute significantly to increased educational achievement...many students lack sufficient incentives to inspire their wholehearted engagement with learning...(p. 8).

Of all the contributions that the business community makes, the most important one is to help students understand the world of work and its relationship to what is learned in school (p. 9). The second publication is an "Issue Statement" recently released by the Minneapolis Youth Trust.[51] It says:

> The work readiness skills, habits, and attitudes needed by the employer are the same as those which are needed by the family, school, and community (p. 1).
> ...The classroom is the workplace for students, where they should learn the work skills, habits, and attitudes directly relevant to later success (p. 2).

It seems clear that improvement of educational productivity is prerequisite to nationwide improvement of business/industrial productivity. It is equally clear that it is fruitless to expect high school graduates to possess positive work habits helpful in finding employment if they have spent their K-12 years practicing negative work habits in their school work. Both pupils **and** their teachers are—or at least **should** be—legitimate "workers" in the workplace called the "classroom". If each is to be a maximally productive worker, the basic rules of increasing productivity in any workplace (including classroom) must be applied. These include:

1. Show the worker the importance of the work tasks to be performed (e.g., how the subject to be learned is used in occupations).
2. Reward positive work efforts when they occur (e.g., provide recognition to pupils who do their best on an assignment).
3. Provide workers (teachers as well as pupils) power to determine their workstyle compatibility with their willingness to accept accountability for their actions.

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4. Introduce variety into the workplace (e.g., combine textbook and experiential learning).
5. Encourage teamwork among workers with shared responsibilities.
6. Encourage and reward the practice of productive work habits.

Application of these basic rules both to "pupils as workers" and to "teachers as workers", is supervised by professional educators who use private sector persons as productivity consultants, would almost surely result in substantial increase in educational productivity. Ample evidence supporting this claim was accumulated during the decade of the 1970s as part of the career education movement. A metaanalysis of that literature summarized those studies demonstrating the effects of a career education treatment on increasing academic achievement as follows:

> ...during the decade...93 outcome studies assessing the impact of career education on gains in basic academic skills were identified...of these, a total of 31 produced statistically significant differences...favoring pupils who had been exposed to a career education treatment...It is concluded that career education can...serve to improve pupil acquisition of basic academic skills at the elementary school level (p. 234).[52]

In this same paper, statistically significant findings demonstrating the ability of career education to increase other aspects of educational productivity and career development can be summarized as follows: (1) Increased use of productive work habits—**10 of 55 studies**; (2) Developed positive work values—**44 of 108 studies**; (3) Increased pupil understanding and appreciation of private enterprise system—**14 of 16 studies**; (4) Developed skills in self understanding of career interests and aptitudes—**72 of 200 studies**; (5) Developed skills in understanding educational and occupational opportunities—**156 of 311 studies**; (6) Developed skills in career decision making—**68 of 134 studies**; and (7) Developed job seeking/finding/getting/holding skills—**12 of 24 studies**.

Certainly, such findings make it clear that there is no need for youth to leave the classroom and enter into an employer's job setting in order to be exposed to and to acquire productive work habits, positive attitudes toward work as part of total lifestyle, and/or increased understanding and appreciation of the private enterprise system. Clearly, these skills and attitude **can**, given proper involvement of private sector resource persons, be provided within the K-12 school system.

It has often been observed that there are far too many persons--both youth and adults--looking for "jobs" and far too few looking for "work". American education can, using the right kinds of positive partnerships between educators and private sector persons, help each youth discover "work"—paid and/or unpaid—as an important and meaningful part of total lifestyle. If youth are to leave the K-12 school system with a sincere desire to find work in the jobs they secure, it will be essential that they have found work in their "job" as "pupils". If we wait until the K-12 schooling period is finished before attempting to help youth first discover "work", it will be a matter of too little too late. That is why it is preferable to entitle this paper "Transition From Schooling to Employment" rather than "Transition From School to Work". So long as persons continue to think in a "transition from school to work" mentality, they miss the

A Proposal for Transition, continued

essential point of the importance of viewing the classroom as a workplace—and both pupils and teachers as workers.

The effort must begin much before the apprenticeship period. As matter of fact, it is essential to recognize that it must begin in the early elementary school years when pupils are acquiring both work habits and work values as they attempt to master basic academic skills. Such efforts are now in place in hundreds of K-12 school districts scattered throughout the nation. Most represent endeavors in which the school system and the broader community—including the business community—share authority, responsibility, and accountability in a truly collaborative relationship. They are, almost without exception, regarded as educational reform efforts in the communities where they operate. They have been given such names as "employability education", "work readiness education", "education/work initiative", and "career education". It matters little which name is used. It only matters that the effort exists at a level that can produce positive results. If this is to happen nationwide, it must once again become an important national youth policy.

Concluding Remarks

There seems to be no doubt that "transition from schooling to employment" problems are currently being solved less well by U.S. policymakers than by their counterparts in other industrialized nations. Based on the available evidence, it is easy to see why the "apprenticeship concept" as seen in various forms of work based learning has great appeal as a possible solution to this problem.

If conceptualized as a supplementary program to be added to existing experiential learning aspects of vocational education, the chances of improving the effectiveness of the total vocational education program through insertion of an "apprenticeship—American style" component appear to be good. Such a proposal should be deserving of positive consideration. If, on the other hand, an "apprenticeship" approach operated by THAT is conceptualized as a substitute for vocational education programs operated by K-12 school systems, serious objections would surely be raised.

An "apprenticeship—American style" approach must, if the American value of freedom of choice for all citizens is to be retained, be accompanied by strong programs of career development—including career awareness, career exploration, career planning, career decision making, and career placement. If the total effort is to operate in the most efficient and effective manner possible, it must also be tied very closely to programs designed to improve educational productivity through the educational reform movement in American K-12 education. The challenges are as clear as they are important. Let us hope they will be accepted by those who make and implement youth policies in America.

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Work Based Learning Basics

The "WHY"

1. High school and college graduates' lack of experience is a major obstacle in obtaining a job.
2. The future demands blending of practical and theoretical education.
3. Hands on experience *and* a sound academic base are major requirements for developing jobs.
4. Cognitive scientists have discovered that students learn academic knowledge and job specific skills best when theory and skills are learned in a real life setting.

The "WHAT"

1. Cooperative programs with education, industry, or community settings
2. Workstudy programs
3. Apprenticeships
4. Learning models and activities relating learning to work

The "HOW"

1. Exploit workplaces and community settings as learning environments.
2. Link work experience to learning.
3. Provide youth with increasingly responsible but ambiguous roles requiring them to be both workers and learners.
4. Foster close relationships between youth and adult mentors.

Educational Myths and Realities

Myth		Reality
One classical school curriculum will meet the needs of all students.	1	Students need more structure and substance in their school programs, but they need them presented in context so they can see the application of their learning.
All students learn at approximately the same rate.	2	There are vast individual differences among students of any age in speed of learning and comprehension of knowledge.
All students learn the basic skills by completion of the elementary grades.	3	Development of basic skills must be placed upon a continuum of learning, as students arrive at different points at different times. Excellence in education requires breaking the requirements of seat time for learning.
Students who fail to achieve in school either do not want to learn or are unable to learn.	4	Research programs suggest that, given adequate time and context for learning and favorable learning conditions, 95% of students can achieve mastery of any basic skill, particularly if they understand the application of their learning.
The traditional didactic method of instruction (lecture and textbook) is the most effective method of teaching for most students.	5	Some students learn rapidly by one method of instruction and more slowly by a different approach. However, after years of experimentation and experience in thousands of schools, contextual teaching/applied learning and work based learning appear consistently more effective than classical instruction.
Real excellence can be found only among those students and programs related to pursuance of a college baccalaureate degree.	6	Some new definitions of excellence are needed. Every school and college program must develop standards of excellence. Excellence is just as important to the aircraft technician as to the engineer. The notion of excellence must be extended to every course and to each student.
Back to the basics means the three R's (readin', writin', and 'rithmetic).	7	In addition to the three R's, success at work, home, and school require additional skills like teamwork, self management, self esteem, problem solving, creativity, etc.

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Real excellence can be found only among those students and programs related to pursuance of a college baccalaureate degree.	6	
Back to the basics means the three R's (readin', writin', and 'rithmetic).	7	

[2]Adapted from Hull, D., & Parnell, D. (1991). The tech prep associate degree: A win/win experience. Waco, TX: Center for Occupational Research and Development.

LEARNING THE BASIC SKILLS

The traditional three R's and the "basic skills" can be learned in various ways. For each skill listed, indicate where you best learned the skill. For example, if you learned to read best through a didactic method (lecture/textbook) as opposed to a work based learning method (through workstudy, as one example), place a ✓ in the appropriate column.

SKILLS	WHERE BEST LEARNED	
	Lecture/Textbook/ Didactic Method	Work Based Learning Approach
1. Learning to learn		
2. Reading		
3. Self esteem		
4. Mathematics		
5. Thinking skills		
6. Self management		
7. Decision making		
8. Problem solving		
9. Communication		
10. Creativity		
11. Interpersonal skills		
12. Goal setting		
13. Designing or improving systems		
14. Teaching others		
15. Negotiating		
16. Leadership		
17. Following written directions		
18. Coping with deadlines		
19. Study habits		
20. Entering, manipulating, and analyzing data		

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Colorado State University, 1992.